NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

SCENARIO DESIGN: ADAPTIVE ARCHITECTURE FOR COMMAND AND CONTROL EXPERIMENT EIGHT

by

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June 2002

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REPORT DOCUMENTATION PAGE		*Form Approved OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.

1. **AGENCY USE ONLY** *(Leave blank)*	2. **REPORT DATE** June 2002	3. **REPORT TYPE AND DATES COVERED** Master's Thesis
4. **TITLE AND SUBTITLE** Scenario Design: Adaptive Architecture for Command and Control Experiment Eight		5. **FUNDING NUMBERS**
6. **AUTHOR (S)** Frankie J. Clark		
7. **PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)** Naval Postgraduate School Monterey, CA 93943-5000		8. **PERFORMING ORGANIZATION REPORT NUMBER**
9. **SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)**		10. **SPONSORING/MONITORING AGENCY REPORT NUMBER**

11. **SUPPLEMENTARY NOTES** The views expressed in this thesis are those of the author and do not reflect the official policy or position of the U.S. Department of Defense or the U.S. Government.

12a. **DISTRIBUTION / AVAILABILITY STATEMENT** Approved for public release; distribution is unlimited.	12b. **DISTRIBUTION CODE**

13. **ABSTRACT** *(maximum 200 words)*

The Adaptive Architectures for Command and Control (A2C2) project is an ongoing research effort sponsored by the Office of Naval Research to explore adaptation in joint command and control. The objective of the project's eighth experiment is to study the adjustments that organizations make when they are confronted with a scenario for which their organizational is ill-suited. To accomplish this, teams will each be in one of two fundamentally different organizational structures (functional and divisional), and each will play two scenarios – one for which their organization is well-suited and one for which it is ill-suited. The purpose of this thesis is to design, test, and implement two scenarios. The background of the A2C2 program and design process of each scenario is described to provide a clear understanding of the methodology behind designing scenarios focusing on specific objectives. Each scenario will prove to be better mission and task oriented for one organizational structure than for the other organizational structure. The Modular Command and Control Evaluation Structure (MCES) is used to design the two scenarios. The Distributed Dynamic Decision-making (DDD) Software is used to implement, pilot and run the scenarios. Both scenarios are to be used for the Adaptive Architectures for Command and Control (A2C2) Experiment Eight in August 2002.

14. **SUBJECT TERMS** Scenario Design: Adaptive Architecture for Command and Control Experiment Eight	15. **NUMBER OF PAGES** 233
	16. **PRICE CODE**

17. **SECURITY CLASSIFICATION OF REPORT** Unclassified	18. **SECURITY CLASSIFICATION OF THIS PAGE** Unclassified	19. **SECURITY CLASSIFICATION OF ABSTRACT** Unclassified	20. **LIMITATION OF ABSTRACT** UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 239-18

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SCENARIO DESIGN: ADAPTIVE ARCHITECTURE FOR COMMAND AND CONTROL EXPERIMENT EIGHT

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN SYSTEMS TECHNOLOGY

from the

**NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

The Adaptive Architectures for Command and Control (A2C2) project is an ongoing research effort sponsored by the Office of Naval Research to explore adaptation in joint command and control. The objective of the project's eighth experiment is to study the adjustments that organizations make when they are confronted with a scenario for which their organizational is ill-suited. To accomplish this, teams will each be in one of two fundamentally different organizational structures (functional and divisional), and each will play two scenarios – one for which their organization is well-suited and one for which it is ill-suited. The purpose of this thesis is to design, test, and implement two scenarios. The background of the A2C2 program and design process of each scenario is described to provide a clear understanding of the methodology behind designing scenarios focusing on specific objectives. Each scenario will prove to be better mission and task oriented for one organizational structure than for the other organizational structure. The Modular Command and Control Evaluation Structure (MCES) is used to design the two scenarios. The Distributed Dynamic Decision-making (DDD) Software is used to implement, pilot and run the scenarios. Both scenarios are to be used for the Adaptive Architectures for Command and Control (A2C2) Experiment Eight in August 2002.

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I. INTRODUCTION

A. THE ADAPTIVE ARCHITECTURES FOR COMMAND AND CONTROL PROGRAM

The multifaceted Adaptive Architectures for Command and Control (A2C2) program is continuing effort to examine adaptation in joint command and control organizations. The Department of Defense (DOD) has focused on how to better organize our forces to provide superior tactical and strategic advantages within a joint military organization. New advances in technology and the creation of highly evolved organizational concepts has enhanced our ability to develop, test, and field new C2 system's and organizational structures.

The overarching hypothesis for the A2C2 program is that changes in the mission, or task structure, will incite changes to the C2 structure of an organization. Decisionmaking research supports the claim that highly effective teams adapt to stressful (i.e., high-workload and complex tasks) situations by using coordination strategies that effectively reduce the effort required to accomplish the mission while maintaining high levels of performance. The extension of this research to the arena of dynamic, distributed organizational decisionmaking spawned research on new ways to organize military forces and motivated the inception of the Adaptive Architectures for Command and Control (A2C2) research program. The goal of the A2C2 research program is to investigate new model-based approaches for designing C2 organizations and explore processes conducive to enabling adaptation.

The A2C2 project is a joint effort by researchers throughout the United States. The project includes researchers from government, academia and industry agencies including The Naval Postgraduate School (NPS), University of Connecticut (UCONN), George Mason University (GMU), Michigan State University (MSU), Carnegie Mellon University and Aptima Inc. The project's goals are to advance the state of knowledge regarding decisionmaking performance in joint organizational settings, to better understand how, why, and when organizations adapt or should adapt to a changing environment, and if changes result in improved organization performance, to develop skills, training, and technology required to support that adaptation (Alphatech/UCONN/NPS, 1995, p.2). The researchers utilize organizational theory and models, human-in-the-loop experiments with military officers, and field observations to accumulate this knowledge.

Field observations were done to determine those persons within a military organization that drive the changes in processes and procedures, or adaptation. A series of experiments began after the field research. These experiments make use of wargaming and simulations and build on the field research, theory, knowledge gained through modeling, and analysis of previous experiments. The experimentation abstracts real world situations, tasks, and problems and brings them into a controlled environment. The manipulation of various aspects of the experiment within this controlled environment allows researchers to produce the environmental conditions necessary to induce adaptation with an organizational structure.

The A2C2 project requires a multi-player real-time simulation to conduct the experiments. The Distributed Dynamic Decisionmaking III paradigm software was created for the A2C2 project experiments. The DDD-III is implemented as a multi-player, real-time simulation that provides a team of decisionmakers with an air, sea, and ground environment, a variety of tasks that represent objectives or events, and controllable platforms, which contain subplatforms, sensors, and weapons. The DDD-III has the ability to constrain and/or manipulate organizational structures such as authority, information, communication, resource ownership, task assignment, etc.

B. PURPOSE OF THIS THESIS

The project's eighth experiment will be conducted in August 2002. The objective is to study the adjustments that organizations make when they are confronted with a scenario for which their organizational is ill-suited. To accomplish this, a given team will be in one of two fundamentally different organizational structures (functional and divisional), and will play two scenarios – one for which their organization is well-suited (congruent) and one for which it is ill-suited.

The purpose of this thesis is to design, test, and implement these two scenarios. The background of the A2C2 program and design process of each scenario is described to provide a clear understanding of the methodology behind designing scenarios focusing on specific objectives. Each scenario will prove to be better mission and task oriented for one organizational structure and bad for the other organizational structure. The Modular Command and Control

Evaluation Structure (MCES) is used to design the two
scenarios. The Distributed Dynamic Decision-making (DDD)
Software is used to implement, pilot and run the scenarios.
Both scenarios are to be used for the Adaptive
Architectures for Command and Control (A2C2) Experiment
Eight in August 2002.

II. THE MODULAR COMMAND AND CONTROL EVALUATION STRUCTURE (MCES)

A.   INTRODUCTION

The MCES is a model used to evaluate Command and Control and Computer (C3) systems and architectures. It makes use of traditional analysis and provides a series of seven steps or modules to evaluate alternative systems and architectures. The modules are designed as a tool to guide the analyst in formulating the problem definition and specific measures needed to discriminate between alternatives.

The MCES was developed by a team of expert researchers from academia, industry, and government. It is used to present complex concepts in a standardized format. The model has the potential to reduce both complexity and ambiguity in the representation of new concepts. This becomes an invaluable tool when presenting issues of great diversity in nature, size, and level of detail.

The MCES model was used in this thesis as an analytical tool to provide guidance in determining the characteristics of tasks that would prove congruent to a particular C2 structure. For the pupose of this thesis those two structures are the functional and divisional organizations.

B.   DEFINING THE MCES MODULES

MCES is characterized by seven modules. The modules are as follows:

1) Module 1 – Problem Formation

2) Module 2 – C2 System Bounding

3) Module 3 – C2 Process Definition

4) Module 4 – Integration of System Elements and
   Functions

5) Module 5 – Specification of Measures

6) Module 6 – Data Generation

7) Module 7 – Aggregation of Measure

Every step in the MCES model is an iterative process. The various modules and their outputs can be seen in Figure 1.
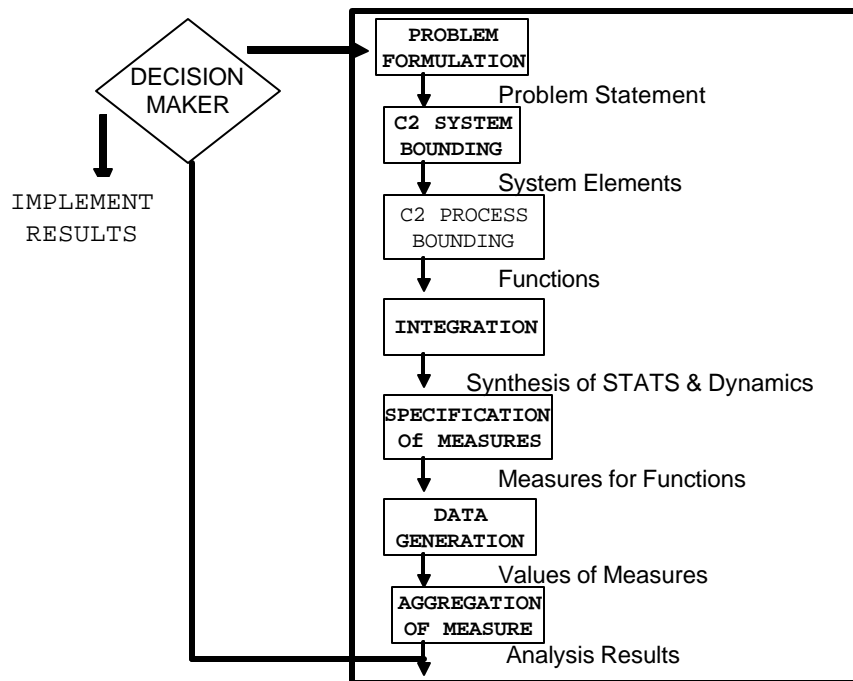
Figure 1. Modular Command and Control Evaluation Structure

The MCES begins by identifying the objective of a particular application, which leads to the formal statement

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of the problem.   The next step is to bound the system involved by producing a list of system elements.   The third step is to build a dynamic framework that identifies relevant processes as a set of functions.   The fourth step combines the system elements and process functions from steps two and three and creates a model for the architecture.   The fifth step is to identify the various measures of performance, measures of effectiveness, and measures of force effectiveness.   The sixth step is designed to generate results or values for the measure in step five.   Finally the values for the measure are collected, analyzed, and interpreted in the seventh module.

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III. DESIGNING THE SCENARIO

A. STRUCTURE OF THE PROBLEM

The A2C2 experiments focus on C2 organizations' abilities to adapt their architecture, C2 processes as well as structures, in response to changes in the mission and the demands of the environment. A focus on the littorals in a joint-level, distributed decision-making environment was the framework utilized the design of the two scenarios.

NPS Professors, primarily from the Command and Control, Computers, Communications, and Intelligence (C4I) Academic Group, set the basis for A2C2 Experiment Eight. As a member of the experiment team for the Office of Naval Research (ONR) sponsored A2C2 research program, the author took on the task of helping design, implement, and test the two scenarios to be used in Experiment Eight. The scenarios would involve a mix of US ships and other assets to counter enemy anti-access capabilities, prepare for follow-on forces, and defend friendly areas against air, sea, ground, and mine threats.

The experimental concept required the teams to perform in both a scenario which their organization was well-suited and a scenario which their organization was ill-suited in order to:

- Examine the assumptions about what causes an organization to be well/ill-suited to a scenario.

- Observe what the decisionmakers do to deal with or adapt to the situation when the

> organization is not well matched to the
> mission.

- Identify indicators of situations where the organization should adapt in order to better deal with the scenario.

The experimental concept included the DDD simulation software to implement and run the scenarios. The A2C2 team also decided to use the same basic scenario format as the two previous experiments.

B. THE APPROACH

The Approach phase used a method similar to the "System Bounding" module of MCES (Module 2), which describes this as a process that enumerates the relevant system elements that bound the problem of interest.

The first step in the approach was to obtain a comprehensive understanding of the fundamental differences between the functional and divisional organizational structure as defined by the A2C2 team. This understanding would be used throughout the development of the scenario. Definitions follow:

- **Functional**: The Decisionmakers (DMs) each have a single responsibility (function) and are allocated assets that have unique capabilities to perform that function. Plus: DMs only need to be trained to operate with their unique assets. Minus: DMs must be involved in a (geographically) wide range of operations, and therefore must have global situational awareness. For Experiment Eight, functional DMs exist as warfare commanders under the Composite Warfare Concept, i.e., Surface Warfare Commander, Strike Warfare Commander, Air Warfare Commander, etc.

- **Divisional**: The DMs all have similar responsibilities that cover several warfare areas, and are each assigned assets with similar capabilities. Plus: DMs have diverse resources to do their tasks, and can concentrate on local operations. Minus: DMs must be trained to operate various assets/resource types and handle varied tasks. Experiment Eight's divisional DMs exist as commanders of multifunction-capable platforms, i.e., CO of the Carrier, CO of the Cruiser, CO of the Frigate, etc.

The next step was to understand the environment to be used in conducting the experiment, i.e., DDD. This influenced decisions considerably in task development and arrangement as it limited the options available for consideration. Resources available within the DDD database required minimal revision to support the scenario development and the tasks required in pursuit of the mission. Questions that guided the effort to determine the types of tasks that were suitable for each organization included:

- What is the overall objective of the mission?
- What tasks could be developed that favored a functional organization?
- What tasks could be developed that favored a divisional organization?
- How could these tasks be arranged to require engagement of intermediate objectives in pursuit of mission accomplishment?
- How can complex tasks that remain good for one organization and not the other be incorporated?
- What resources are required for each task?
- Do the resources available match the requirements?

Next, tasks classes were developed based on the assumptions about what task characteristics would be more

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suitable for a specific type of organization. The basis of the task development was that tasks with high resource requirements of the same type could be better handled by a functional DM, while tasks with resource requirements of different types could be better handled by a divisional DM. This theory was to be used throughout the two scenarios. Specific labeling of tasks was marked with "good for Functional, but bad for Divisional", "good for Divisional, but bad for Functional", or "neutral". Those tasks that were identified as "neutral" were labeled as such and not considered for the purposes of the scenario development. The remaining tasks were categorized and later used to create two separate scenarios, each of which is advantageous to only one organization. In identifying tasks that were good for one, but bad for the other organization, software limitations had to be taken into consideration. The DDD III software is an abstract simulation of the real world. The limitations resulting from this abstraction and the capabilities of the DDD software had to be understood prior to developing the tasks for each organization. After gaining that understanding, it was discovered that some initial assumptions of "good for one, but bad for the other" would be negated due to software constraints. Thus, after taking those software constraints into consideration, tasks were developed that were considered as "software" – good for one, but bad for the other. ("Software" good and bad is based on what can be represented within the constraints of the software.) The categories are detailed in Table 1.

Functnl/Divnl (good/bad)	Divnl/Functl (good/bad)
Tasks that require multiple resources of the same type.	Tasks that require multiple resource of different types.
Multiple threats of different types in one geographical area (simultaneously).	Multiple threats of same type spread over large geographical area (simultaneously).
Tasks that require use of limited resources spread throughout the scenario.	Tasks that require close in defense of assets (taking focus from overall situational awareness)
Timed requirements for completing tasks (multiple resource requirements of the same type)	Timed requirements for completing tasks (multiple resource requirements of different types)

Table 1. Task Types for Both Scenarios

The approach phase considered task resource requirements; task precedence; information flow among tasks, task opportunity windows (including Complex or Unexpected); and task location. This phase set the bounds within which to develop the scenarios.

C. SCENARIO CREATION

Achieving consistency by utilizing the MCES throughout design and implementation of the model, tasks of the types in Table 1 were developed in accordance with guidelines provided in Module 3, or C2 Process Definition.

The geographical layout of the battle area was crucial to the development of the scenario. The battle area would be the same as used in the previous two A2C2 experiments. The battle area includes an enemy country that has invaded a neighboring country, and three surrounding neutral countries

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two of which are separated from the others by the sea. The
aggressor contains high value targets that make up the
objectives in the mission itself. The high value targets
include a command center, two naval bases, and two air
bases. The complete layout of the battle area along with
the strategic placement of U.S. forces is illustrated in
Figure 2.
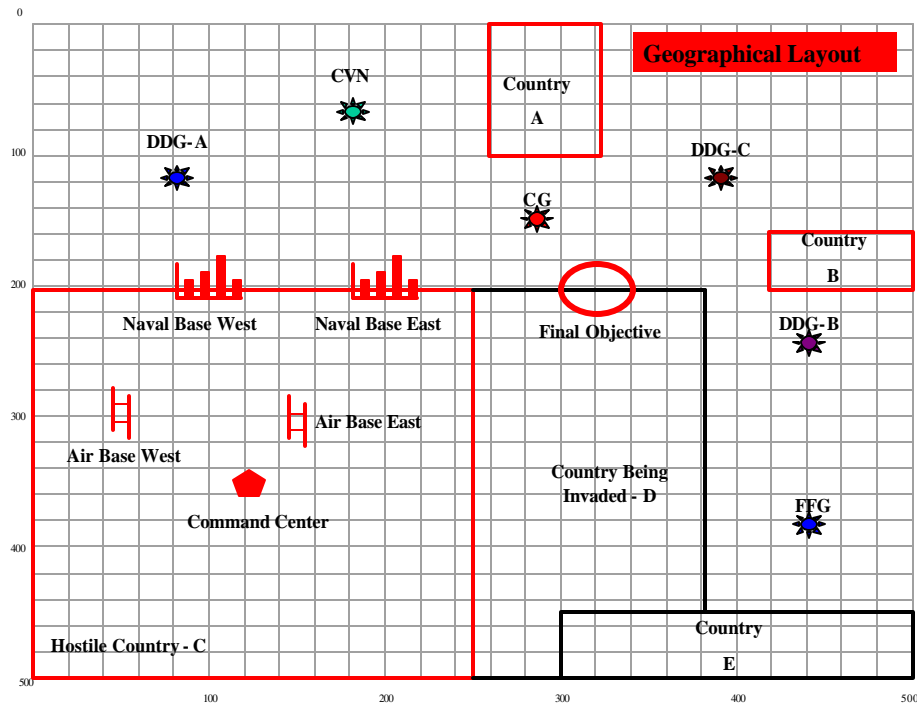
Figure 2. Geographical Layout of Battle Area

The next step was to formulate the resource types,
asset types, and asset allocation. For each task, the
resource type is what weapons and/or sensors will be
required to complete that task. Finally, asset types
specify the platforms and subplatforms that will carry the
resource types necessary to complete a task. Asset
allocation is the distribution of weapons, sensors and
assets among the various platforms and subplatforms. The
desired performance characteristics of the organizations

had to be considered before this could be done, since they are independent. The following characteristics are assumed to degenerate the performance of an organization:

1) **Increased communication/coordination among DMs.** This creates delays, therefore reducing decision-making effectiveness, speed of command, and score on time-critical and synchronization-critical tasks. The best organization is the one that can act independently with only limited, necessary interdependencies among its members (due to coordination/communication).

   To increase DM-DM communication:
   a) Tasks are introduced that require multi-DM processing; this requires DMs to coordinate and synchronize their assets for such task processing;
   b) Tasks are introduced with information-flow between them and precedence constraints; this creates dependence of DMs upon each other's activity/success/processes; these tasks are made time-critical.

2) **Disproportionate workload (related to task load) among DMs.** This creates overload, therefore introducing delays in decision-making and increasing the probability of DM failures (such as wrong and/or inefficient resource utilization, incorrect task allocation, etc.). The best organization is the one that can balance the workload among its members.

Design Set-Up:
- Functional: In this experiment, the functions are defined as warfare areas. Assets for a single warfare area are assigned to a single DM. Assets from a single base or platform can be assigned to different DMs.
- Divisional: The divisional organization is defined by assigning assets on one base or platform, covering a range of warfare areas, to a single DM.

Problems:
- The fact that some of the assets have varied capabilities, introduces the problem of function

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overlap in the functional organization. That is, some DMs in the functional organization do not have "pure" functions. They can't own the the function exclusively (e.g. ISR).

- The asset allocation is not identical for every base or platform, therefore creating differences in capabilities of DMs in the divisional organization.

The resource types, organizational assets, and both functional and divisional asset allocations is shown below.

A. Resource types (for task requirements and asset capabilities definition).

AAW = anti-air warfare (aircrafts)
ASuW = anti-surface warfare (ships)
BMD = ballistic missile defense (launched enemy missiles)
STRK = ground strike (ground targets, including missile launchers)
SAR = search and rescue
MINES = clear sea mines
SOF = special operation forces (designation for precise target elimination, capturing ground targets/positions)

Figure 3. Resource Type

B. Subplatform/Weapon/Sensor – Resource Capabilities.

Asset Name	Resource Capabilities						
	AAW	MINES	ASuW	BMD	STRK	SAR	SOF
TLAM	0	0	0	0	1	0	0
TTOM	0	0	0	0	1	0	0
SM2	1	0	0	0	0	0	0
ABM	0	0	0	1	0	0	0
UAV	0	0	0	0	0	0	0
HH-60	0	0	0	0	0	1	0
HARPOON	0	0	1	0	0	1	0
SFB	0	0	1	0	0	0	0
F-18A	1	0	0	0	0	0	0
F-18S	1	0	0	0	0	0	0
SOF	0	0	0	0	0	0	1

Figure 4. Assets

C. Organizations – DM-Asset Allocation.

<u>Functional</u>-the column labels show the warfare areas
assigned to the DMs, and the columns below then show
the assets allocated to them.
<u>Disional</u>-the row labels show the platforms assigned to
the divisional DMs, and the rows show the assets
allocated to them.

DM	STRIKE	BMD	ISR	AWC	SuWC/Mines	SOF/SAR
CVN	2F18S		E2C, 1UAV	2F18A	1SFB, 1MH53	1HH60
DDGA	6TLAM	3ABM,4TTOM	1UAV	6SM2	1SFB, 2HARP	1HH60/SOF
DDGB	6TLAM	3ABM,4TTOM	1UAV	6SM2	1SFB, 2HARP	1HH60/SOF
CG	6TLAM	3ABM	1UAV	6SM2	1SFB, 2HARP, 1MH53	1HH60
FFG	2F18S		E2C, 1UAV	2F18A, 4SM2	1SFB, 2HARP, 1MH53	1HH60
DDGC	6TLAM	3ABM,4TTOM	1UAV	6SM2	1SFB, 2HARP	1HH60/SOF

Figure 5. Asset Allocation

The next step was to determine the overall mission,
which would be the same for each scenario. The only
difference in the missions was the assets necessary to
complete each task in the mission. Those assets were based
on the task types identified in Table 1.

The functions of the MCES model and how they were used
to develop the mission are described below:

<u>Sense:</u>

- Given enemy high value targets (HVT): Navy Base
  West, Navy Base East, Air Base West, Air Base East
  Command Center, and Country D's Port, the planned
  scenario called for control or destruction of
  enemy sites.

- Environmental factors influenced the process by
  which enemy forces were utilized to combat U.S.
  forces. Primary opponent forces would be land
  based thus requiring U.S. forces to conduct a

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primarily sea-based campaign against forces ashore. Common littoral water combat was mostly defense against attack by enemy ships, patrol boats, aircraft, and anti-ship missiles. Weather was common for both scenarios and therefore not considered in the model. Neither was terrain (other than land or sea) as that would go beyond the capability of the software utilized.

Assess:

- An initial capability assessment of enemy and friendly forces was determined. This helped in determining the number of enemy forces to be used in the scenarios.

Generate:

- To create possibilities of alternate courses of action, event timers were built into the scenarios which would trigger actions in the mission objectives if the events were not achieved within a prescribed time. This would allow for some element of surprise and possibly incite the need to adapt to a situation non-congruent with the organizational structure.

Plan:

- The planning stage was the most significant. Employment of enemy forces was designed partially on expectation of reaction of U.S. forces to attacks. While the mission for U.S. forces was defined in the initial problem, modeling the actions of enemy forces would challenge a DM. Utilization of combined air and sea attacks

against nearby U.S. assets and neighboring
countries would require DMs to effectively
utilize available resources to counter those
attacks.

The decision was made to focus on the tasks that were
part of the mission and then add non-mission critical tasks
in order to add realism, increase complexity, induce
communication and coordination, and complicate the
completion of the mission. The task graphs for each
scenario, Functional and Divisional are shown in Figure 6
and Figure 7. The missions are essentially the same accept
the resources required to accomplish the individual tasks
are different.
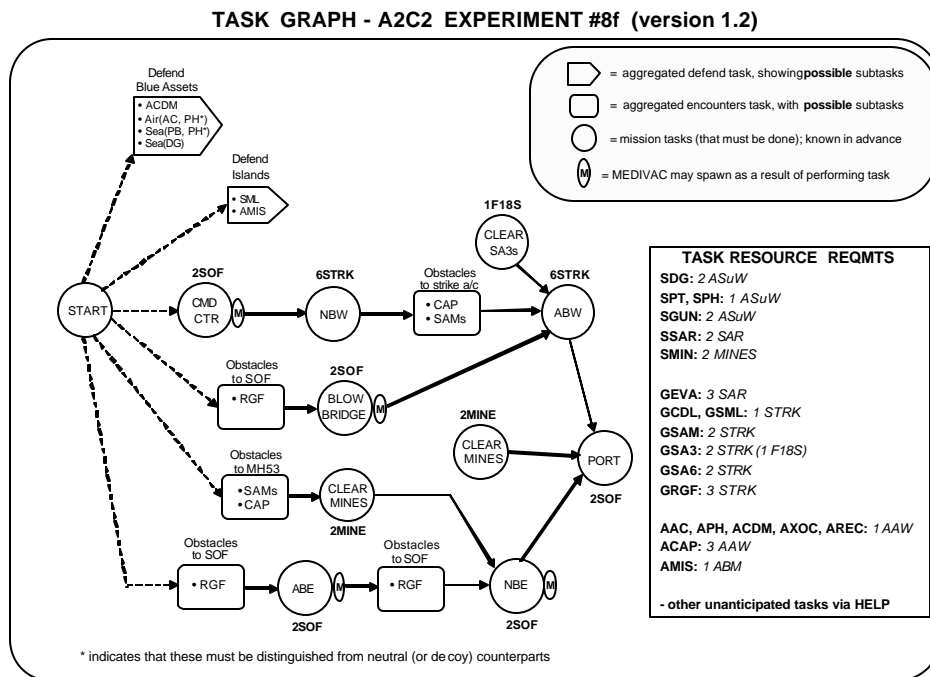
Figure 6. Functional Scenario Task Graph

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TASK GRAPH - A2C2 EXPERIMENT #8d (version 1.2)
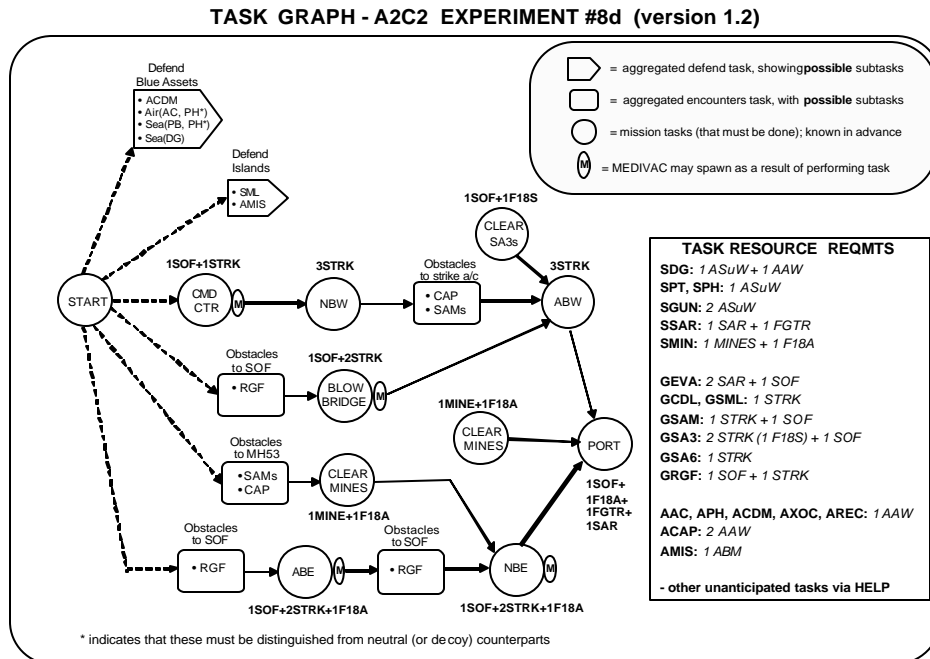
Figure 7. Divisional Scenario Task Graph

Once the mission for each scenario was developed and the assets necessary to complete the mission were identified, there were a few questions which had to be answered:

- What type of platforms will the enemy have at its disposal? (i.e., aircraft, fast boats, mines, surface to air missile, ballistic missiles, ground forces, etc.)

- How will these enemy assets be implemented into each scenario and remain consistent with the "good for one, bad for the other" structure?

- What will be the timing sequence for when these assets are brought to bear by the enemy?

- What type of assets will friendly forces command in order to counter the enemy threats?

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The event timelines were developed next. An event
timeline is the sequence of time for which individual task
appears in the scenario. For instance, the time an enemy
aircraft would be launched from an enemy airbase to attack
one of the friendly ships in the scenario, the waypoints and
velocities on each leg, etc. Event timelines were
synchronized with specific action events occurring
throughout the model. Event timelines were developed for
the events that are common for both scenarios. These events
are not part of tailoring scenario toward tasking functional
or divisional DMs, but inserted to require timely action in
both. Elimination of hostile targets was assumed to be
systematic based on value of the target, potential threat to
friendly forces, time, and required asset utilization. Time
limits were placed on the amount of time a DM had to
complete a task once he has started an attack on that
particular task providing DMs with semi-realistic timelines
to eliminate an enemy target prior a response from the
enemy.

Next the identification of every type of asset the
enemy would possess was established. Then for each
scenario, it was necessary to determine what would be
required to destroy or neutralize each threat, maintaining
consistency with the task types described in Table 1. The
two figures below, Figures 8 and 9, describe the following:

- All task classes and abbreviations for tasks to be
  used in each scenario.
- A brief description of each task class.
- The resources required to either neutralize or
  destroy a task of that class.

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FUNCTIONAL

Symbol	Description	AAW	MINES	ASuW	BMD	STRK	SAR	SOF
NBE	Naval base – East	0	0	0	0	0	0	2
NBW	Naval base – West	0	0	0	0	6	0	0
CMD	Enemy command center	0	0	0	0	0	0	2
DG	destroyer w missiles/mines	0	0	2	0	0	0	0
PT	fast patrol/missile craft	0	0	1	0	0	0	0
CDL	coastal defense launcher	0	0	0	0	1	0	0
SML	SCUD msl launcher	0	0	0	0	1	0	0
AC	aircraft attack wave	1	0	0	0	0	0	0
ABE	Air base – East	0	0	0	0	0	0	2
ABW	Air base – West	0	0	0	0	6	0	0
SAM	SAM site – fixed	0	0	0	0	2	0	0
NU	commercial air	0	0	0	0	0	0	0
NU	white/merchant ship	0	0	0	0	0	0	0
CDM	CD cruise missile	1	0	0	0	0	0	0
MIS	SCUD-launched missile	0	0	0	1	0	0	0
MIN	sea mines	0	2	0	0	0	0	0
XOC	exocet fired at blue ships	1	0	0	0	0	0	0
PH	air possible hostile - Y	1	0	0	0	0	0	0
PH	air possible hostile - N	1	0	0	0	0	0	0
PH	ship possible hostile- Y	0	0	1	0	0	0	0
PH	ship possible hostile - N	0	0	1	0	0	0	0
SA3	*mobile* SAM site	0	0	0	0	2	0	0
EW	possible SCUD launch	0	0	0	0	0	0	0
S&R	basic rescue effort at sea	0	0	0	0	0	2	0
REC	red recon aircraft	1	0	0	0	0	0	0
RGF	red ground force	0	0	0	0	3	0	0
SML	SCUD 2nd msl launcher	0	0	0	0	1	0	0
S&R	indicates nothing there							
BR	major bridge	0	0	0	0	0	0	2
PRT	final objective -secure Port	0	0	0	0	0	0	2
TSK	high priority complex task	3	0	0	0	0	0	0
TSK	high priority complex task	0	0	3	0	0	0	0
EVA	evacuate wounded	0	0	0	0	0	3	0
GUN	gun runners	0	0	2	0	0	0	0
CAP	Aircraft attacker/defender	3	0	0	0	0	0	0
SA6	SAM cluster – fixed	0	0	0	0	2	0	0

Figure 8. Functional Scenario Tasks and Resource

Requirements

DIVISIONAL

Symbol	Description	AAW	MINES	ASuW	BMD	STRK	SAR	SOF
NBE	Naval base – East	1	0	0	0	2	0	1
NBW	Naval base – West	0	0	0	0	3	0	0
CMD	Enemy command center	0	0	0	0	1	0	1
DG	destroyer w missiles/mines	1	0	1	0	0	0	0
PT	fast patrol/missile craft	0	0	1	0	0	0	0
CDL	coastal defense launcher	0	0	0	0	1	0	0
SML	SCUD msl launcher	0	0	0	0	1	0	0
AC	aircraft attack wave	1	0	0	0	0	0	0
ABE	Air base – East	1	0	0	0	2	0	1
ABW	Air base – West	0	0	0	0	3	0	0
SAM	SAM site – fixed	0	0	0	0	1	0	1
NU	commercial air	0	0	0	0	0	0	0
NU	white/merchant ship	0	0	0	0	0	0	0
CDM	CD cruise missile	1	0	0	0	0	0	0
MIS	SCUD-launched missile	0	0	0	1	0	0	0
MIN	sea mines	1	1	0	0	0	0	0
XOC	exocet fired at blue ships	1	0	0	0	0	0	0
PH	air possible hostile – Y	1	0	0	0	0	0	0
PH	air possible hostile – N	1	0	0	0	0	0	0
PH	ship possible hostile- Y	0	0	1	0	0	0	0
PH	ship possible hostile – N	0	0	1	0	0	0	0
SA3	*mobile* SAM site	0	0	0	0	2	0	1
EW	possible SCUD launch	0	0	0	0	0	0	0
S&R	basic rescue effort at sea	0	0	1	0	0	1	0
REC	red recon aircraft	1	0	0	0	0	0	0
RGF	red ground force	0	0	0	0	1	0	1
SML	SCUD 2nd msl launcher	0	0	0	0	1	0	0
S&R	indicates nothing there							
BR	major bridge	0	0	0	0	2	0	1
PRT	final objective -secure Port	1	0	1	0	0	1	1
TSK	high priority complex task	1	0	1	0	0	1	0
TSK	high priority complex task	0	1	1	0	0	1	0
TSK	high priority complex task	1	1	0	0	0	1	0
EVA	evacuation of wounded	0	0	0	0	0	2	1
GUN	gun runners	0	0	2	0	0	0	0
CAP	aircraft attacker/defender	2	0	0	0	0	0	0
SA6	SAM cluster – fixed	0	0	0	0	1	0	0

Figure 9. Divisional Scenario Tasks and Resource

Requirements

All tasks that do not appear on the mission task graphs in Figures 6 and 7 are considered non-mission critical tasks. These tasks, as stated before, are added to increase the workload of DMs, induce communication between DMs, and force adaptation in situations which overwhelm one or more of the DMs. The timing sequence of when these tasks would appear in the scenario was very important to maintain consistency with the overall objective of the experiment. These non-mission critical tasks were integrated into each scenario in a timed sequence in the form of surface boat attacks, floating mines, air wave attacks, search and rescue missions, encounters with ground forces, coastal defense missiles, ballistic missiles, surface to air missile sites, and neutral platforms in the form of air and sea contacts.

D. MEASURES

In keeping with the MCES model, the measures for the scenario can be divided into three separate categories:

1) Measures of Force Effectiveness (MOFE),

2) Measures of Effectiveness (MOE),

3) Measures of Performance (MOP).

MOFEs are evaluated at the boundary between the force and the environment. MOEs are evaluated at the boundary between the force and the C2 system. MOPs are evaluated within the boundaries of the C2 system. The measures for both scenarios encompassed all three.

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A decision had to be made whether to focus on individual performance or team performance. Since the performance of the organizational structure itself is the main focus of the experiment, it was decided to go with the team performance. Although the main focus is team performance, individual performance will play a major role in the team performance. The measures of performance are as follows:

- Information exchange
  - Communication
- Shared situational awareness
  - Ground truth vs. individual assessment of situation
- Mission effectiveness
  - Completion of tasks
  - Time of detection, identification, and elimination of hostile targets
  - Completion of final objective
  - Accumulated point values
- Coordination
  - Effective use of resources (especially limited resources, i.e., SOF teams, SAR Helos)

These measures can be evaluated by setting point values for tasks and targets, recording communications, logging all events in the software during the running of the experiment, and by use of questionnaires.

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IV. DEVELOPMENT OF THE DDD SOFTWARE FILES

A. INTRODUCTION

The following chapter includes exerpts directly from the DDD manual formulated by Professor David Kleinman, a research professor at the Naval Postgraduate School. The exerpts from the manual provide a clear and precise understanding of the DDD software, its parameters, and performance capabilities.

The 3rd-generation Distributed Dynamic Decisionmaking (DDD-III) paradigm was designed to meet the needs for empirical research in adaptive architectures for Joint Command and Control (C2). The DDD-III is implemented as a multi-player, real-time simulation that provides a team of decisionmakers with an air, sea and ground environment, a variety of task classes representing things to do, and controllable platforms that contain subplatforms, sensors and weapons (resources). This flexible research paradigm provides the ability to conduct controlled experiments in a laboratory environment, using problems that are abstractions of "real world" command and control.

The design of the DDD-III focuses on the dynamic/execution phase of a mission and allows for manipulation of key structural variables in task and organizational dimensions. The DDD-III has the ability to constrain and/or to manipulate organizational structures such as authority, information, communication, resource ownership, task assignment, etc.

The scenario generator is the tool through which the experiment designer translates the mission requirements

found in a "real-world" military environment into DDD-specific constraints, thereby defining the Joint warfare "game" world. The scenario generator assists the experimenter in preparing the many options and variables used to create the game. There are four major categories of variables needed by the simulation:

> 1) General information - includes time, number of players, location of land, etc.
>
> 2) Platform and task class information - defines both friendly and "hostile" force categories, their general properties and characteristics.
>
> 3) State information - defines attributes, resources and game element sequencing on a task-by-task, and platform-by-platform basis.
>
> 4) Maneuver information - defines the actual arrivals and movements of the tasks.

B. IMPLEMENTATION OF TASKS

The geographical setup and platform location were used from the previous experiment as shown in Figure 2. The implementation of tasks had to begin with mission critical tasks first. After programming the mission into the DDD software files the next step was to add all non-mission critical tasks. The battle order for the two scenarios will be presented in this section to provide a clear statement of the mission which is the same for each organization.

Implementing tasks followed the guidelines of the DDD manual based on task type. The parameters for implementing the various tasks are described below:

Decision Structure

This command defines the number of decisionmakers (DMs) present in the simulation. In addition it identifies the command structure they are contained within (in reference to the other DMs). The command structure affects authority/responsibility, and asset control issues among DMs. In the DDD a DM can unilaterally (re)assign tasks and/or transfer assets among those DMs that are in his/her suborganization. Only acyclic structures are supported in DDD-III. (Note: Asset ownership was fixed for our scenarios.)

Number of Attributes

This command sets the total number of attributes used to define the characteristics of the tasks, and assigns each attribute in the resource vector a unique name. The attribute's position in the vector is critical - later inputs or references to the attribute vector rely on the ordering of the numerical values to set the attribute characteristics (i.e., all attributes must have been defined when referencing the attribute vector). *The first two attributes in the vector must be defined as follows*: a1 = Value, is the value that the task is worth to the team when properly accomplished. (It also represents the amount lost if not successfully attacked.) a2 = Time, is the duration of the engagement once prosecution/attack on the task is begun.

Number of Resources

This command sets the total number of resource categories that will be used to define the characteristics of the platforms. Platforms represent friendly assets, such as aircraft, ships, ground units and fixed bases. Each platform will have a vector of resources where each element in the vector is assigned a unique name. The position of the resource value in the vector is critical - later inputs

or references to the platform resource vector use the order
of the numerical values to set the resource
characteristics.

Platform Classes

This command sets the number of unique classes of platforms
that exist in the scenario. For the purposes of platform
class number both platforms (parent) and subplatforms
(child) are counted. (The actual specification of
platform/subplatform relationships is set using the
platform subplatform command).

Platform General

This command sets the parameters for each specific platform
class. These initial specifications create the platform
class and form the basis for class uniqueness. The values
of these parameters and their various combinations provide
a broad range of options to the scenario designer to create
models of real-world assets. (Air, sea and ground).

Platform Ownership

This command defines which DMs can legally take ownership
of platforms of this class. In other words, the command
describes the platform ownership structure. The DDD will
not allow a platform to be transferred to, or owned by, a
DM not specified via this command.

Platform Resource

This command assigns the values to the resource vector
associated with a specific platform class. These values
will be carried through to each platform (instantiation) of
that class. This allows the scenario designer to "arm" the
platforms with various resource capabilities, giving
platforms the ability to engage tasks.

Platform Range

This command sets the range of the sensors/weapons
contained on each platform. Each platform has three types
of notional sensors/weapons in correspondence with Air, Sea
and Ground type tasks, respectfully. For each type of
task, any given platform (of the specified class) has five
circular ranges displayable as rings centered on the
platform. If a task is within ring #1 it can be seen
(detected) by the platform. If the task is within ring #2
various attributes of the task will be read (measured),
although the values may be masked/corrupted by noise. If
the task is within range ring #3 the task class becomes
known (identified) automatically. The fourth range ring
denotes the range in which the platform can attack the
task. Ring #5 indicates the range at which the platform
can be attacked by that type of task. By varying these
ranges the scenario designer can model various abilities
and limitations of each platform class. The only
constraint is that the detection range be larger than
either the measure or identify ranges.

Platform Subplatform

Subplatforms are previously defined platforms that reside
on another platform (e.g. aircraft on a carrier, troops on
a helicopter). Platforms of a given class may contain a
number of subplatforms. There are several rules that apply
to the subplatform concept:

    1) A given class of subplatform (child) can reside on
    many platforms (parent).

    2) All subplatforms of a given class have identical
    properties, independent of the platform(s) they reside
    within.

    3) The "depth" of the nesting structure is defined by
    the designer and is not limited by the software –
    however, loops MUST be avoided (i.e.: A⊂B⊂A)

Task Attack

This command sets the ability that various decisionmakers
have to attack tasks of a given class. This allows the

scenario designer to specify who can be assigned to attack a given task class (following the rules imposed by the command structure via the *decision structure* command).

Task Resource

This command sets the amount of resources required to properly engage the task (and receive full point values - engaging task with less than the required amount will result in "partial credit") This overrides any default values previously defined, and allows the scenario designer to further tailor the properties of individual tasks.

Task Prerequisites

This command sets an "order" in which tasks must be prosecuted. This allows the scenario designer to cause the team to plan courses of action and establish a sequential mission plan.

Task Spawn

This command sets a parent/child relationship for tasks. Depending on the option selected, "child" tasks will appear if the "parent" task is either attacked or has disappeared (see *maneuver definition*). This allows the scenario designer to include a mission "growth" or conditional task tree in the scenario. Thus, the taking of a beach can spawn artillery attacks on the beachhead.

Task Remove

This command inhibits arrival of future tasks depending on either the attack or disappearance of a given task. This can be used by the scenario designer to "anticipate" paths that may or may not be followed by the DMs during the simulation.

Task Maneuver

Maneuvers describe the track of a task, which includes turning points, velocity and its "life span". For each task the scenario generator allows the user to enter up to five straight-line maneuver segments. The first element of the maneuver command defines the starting point for the task; the last element defines the ending point. The commands between the start and end point fall into two categories - ordinary and staying maneuvers. An ordinary maneuver moves the task between a starting point and a destination point at the designated velocity. A staying maneuver allows the task to remain at certain position for a designated period of time.

All other important aspects of the syntax and programming parameters are located in the DDD manual. The syntax follows the same disciplines as any computer programming language and must be strictly adhered to in order to produce the desired results.

The battle order was constructed from the two mission task graphs and is the same for both organizations. The battle order is presented below.

I. SITUATION

A. General: Four months ago the Country C invaded Country D in order to seize the natural gas fields located along the border. In an attempt to deny United States entry in the conflict Country C also seized Country D's only real seaport. From the outset the United States has demanded that Country C leave Country D immediately. Country C's reaction has been to further destabilize the region by threatening to use tactical ballistic missiles against the countries in the region that aid the U.S. (i.e. Country A & B). In addition they have stated that they will mine the straits to shut down all merchant traffic within the region. In the last several months Country C has also been successful in starting a civil war in Country A. Presently Country A's elected government has retained control of the country but their power appears to be slipping. Last month, Country B agreed to base U.S. military aircraft.

Currently, U.S. naval forces are in position to commence offensive action to drive Country C's forces out of Country D. In addition, the U.S. would like to stabilize the region and ensure that sea lines remain open to merchant vessels.

B. Enemy: Country C's military is currently forward deployed within its own borders as well as Country D. Country C's forces are concentrated around the ports and airfields that they control. They have an integrated air defense system that is arrayed to protect these high value targets. Their air defense system includes both aircraft and surface to air missiles sites (SAM). In the last month they have repositioned their SCUD missile launchers for offensive operations. Likewise they have placed all their coastal defense missiles in positions that give them maximum standoff against naval shipping. Country C's most likely course of action is to attack U.S. naval ships while launching SCUD Missiles at Countries A & B. It is clear they will not sit back and allow U.S. airpower to strike the first blow.

C. Friendly Forces: Joint Task Force (JTF) Fury has deployed into AOR. JTF Fury consists of an augmented carrier battle group and a task organized special operations force. The joint task force is arrayed to provide maximum striking power towards Country C while at the same time providing an Anti-Ballistic Missile shield for the Countries in the region. For the last several weeks Special Operation Forces (SOF) units have been operating in Country C.

II. Mission: On order JTF Fury will conduct offensive operations to restore Country D's borders in order to protect the countries of the region from further attacks by Country C.

III. Execution

A. Commander's Intent: The enemy has given us an opportunity to isolate and destroy its forces piecemeal. Based on his current disposition every effort should be made to cut the enemies lines of communication. The early destruction of command & control centers will enable us to divide the enemy into isolated garrisons that can be attacked. The desired end state for this operation is the

removal of Country C's forces from Country D. In addition, Country C's military should be reduced to the point that they will be unable to conduct large-scale offensive operations for 5-7 years.

    B. Tasks

        1. ISR
           -Provide maximum coverage on enemy garrisons
           -Provide targeting information for BMD commander to counter SCUD threat
           -Coordinate with Strike Commander to asset in Strike operations

        2. Strike
           -On order destroy Country C's Naval Base West
           -On order destroy Country C's Airfield West
           -Deny enemy troop reinforcements between garrisons
           -Destroy high value SAM complexes

        3. Ballistic Missile Defense
           -Destroy enemy SCUD launchers
           -Protect U.S. Forces from SCUD attack
           -Protect the neutral countries in the region from SCUD attack

        4. SOF/SAR
           -Conduct ground reconnaissance
           -On order destroy command & control centers
           -On order occupy Country C's Airfield East
           -On Order occupy Country C's Naval Base East
           -On Order occupy Country D's Naval Base
           -Conduct CSAR in support of the operation

        5. Mines/Anti Surface
           -Protect U.S. Forces from enemy surface ship attacks
           -On order clear enemy sea mines
           -Maintain mine free commercial shipping lanes

        6. Air Warfare
           -Protect U.S. Forces from enemy air attack

-On order provide strike aircraft protection
                    during their operations
                    -Be prepared to destroy enemy anti-ship
                    missiles fired at U.S. naval forces

        D. Coordinating Instruction

            1. ROE
                    a. All forces have the right of self-defense
                    b. All air, ground and surface contacts must
                    be positively identified as hostile before
                    engaging

            2. Priority Targets
                    a. SCUD launchers
                        b. Command & Control centers
                    c. Mobile SAMs
                    d. Enemy strike aircraft
                    e. Coastal defense missile sites

        The battle order provides a clear understanding of the
enemy assets and capabilities along with the assets and
resources that the U.S. forces posses. The tasks were
implemented with attack/counter attack and
offensive/defensive capabilities based on their type.

V. PILOTING THE SCENARIOS

A. TESTING MISSION COMPLETION (2DM)

The implementation of tasks into the DDD software
files was the most time consuming phase of the scenario
development process. Ensuring all syntax and programming
parameters of the software were followed was very
important. The next step was to test the scenario in a 2
DM environment.

The 2DM environment allows all assets to be controlled
by only 2 decisionmakers and can be accomplished using one
computer terminal. The 2DM environment provided a "God's
eye" view of the entire battle area. All tasks regardless
of geographical location were visible by to both
decisionmakers. Tasks that would normally require sensors
to detect were visible without satisfying this requirement.
All SCUD missile launchers, red ground forces, SAM sites,
coastal defense launchers, and patrol craft were identified
and visible throughout the run of the scenario. This
feature is very useful when testing in order to determine
if the location of all tasks facilitates accomplishment of
the overall objective.

The first objective was to test the mission
completion. This phase was designed to determine if the
actual mission from the task graphs was able to be
completed prior to the end of the scenario run. The
following problems were encountered in both scenarios:

- There were too many SAM sites in the scenario
  which severely impeded the movement of friendly

assets and thereby prohibited completion of the
mission.

- Detect, measure, and identify ranges for some
  asset sensors were incorrect and did not allow
  and asset to attack a mission critical task
  before being destroyed. (Sensor ranges were
  incorrect.)

- The resource requirements for mission critical
  tasks were too robust to facilitate proper
  coordination among DMs. (Resource requirement
  issue.)

- Too many prerequisites for certain tasks existed
  and prohibited completion of the mission.

- The scoring algorithm for the amount of points
  given at the completion of a task needed to be
  modified.

Once these problems were identified, it was necessary to
correct them immediately before proceeding to the next
phase in the testing of the two scenarios. All problems
were corrected and retested to ensure the problems no
longer existed. The retesting proved the scenario missions
could be completed in the time allotted for the run of the
scenarios.

B.   TESTING COMPLETION OF NON-MISSION CRITICAL TASKS

Once the mission completion was tested the next step
was to test the completion of all non-mission critical
tasks. The non-mission critical tasks include destroying
enemy aircraft, scud missile launchers, scud missiles,

coastal defense launchers, coastal defense missiles, enemy boats, mines, etc. All tasks which did not have to be destroyed in order to complete the mission fall under the category of non-mission critical tasks. The following problems were encountered in both scenarios:

- SCUD missile launchers were not properly located to allow friendly weapons the ability to destroy the launched SCUD missiles. (based on the range of the weapons)

- SCUD missile launchers were not properly positioned to provide the ambiguity between DMs to induce confusion as to who had responsibility to destroy the launched missile. (Divisional case only.)

- The SCUD Launchers launched missiles that did not reach their targets. (Maneuvering vectors incorrect.)

- The Coastal Defense missile launcher launched missiles that did not reach their target. (Maneuvering vectors incorrect.)

- Enemy aircraft appeared and disappeared at random and never engaged friendly forces. (Maneuvering vectors incorrect.)

- Enemy ships appeared and disappeared at random and never engaged friendly forces. (Maneuvering vectors incorrect.)

- Unanticipated and complex tasks never appeared in the game. (Timing sequence issue.)

- Search and Rescue mission did not stay in the game long enough to allow friendly forces an opportunity to complete the task. (Timing issue.)

- Various tasks could not be engaged because platforms did not possess the capability to engage them. (Resource vector issues.)

- The scoring algorithm for the amount of points given at the completion of a task needed to be modified.

All of the aforementioned problems were corrected upon their discovery. Many of the non-mission critical tasks had to be revisited in order to ensure the tasks remained consistent with the theories set forth in Table 1. This was accomplished by introducing these tasks in waves of various times, size, and speed.

C. CREATING FOUR SEPARATE SOFTWARE FILES FOR EXPERIMENT EIGHT

Converting the two scenarios into four separate DDD XS files was the next phase. After testing the two scenarios in the 2DM environment we had two complete scenarios one that is good for the functional organization but bad for the divisional organization, and one that is good for the divisional organization but bad for the functional organization. The researchers at NPS refer to the scenario that is good for the functional organization as "f" (little f) and the scenario that is good for the divisional organization as "d" (little d).

The purpose of making four XS files is to test the guidelines and questions set forth for A2C2 Experiment Eight. Each scenario will be run using both organizational structures. Scenario "f" will be run with a functional organization to prove it is good for functional and it will be run with a divisional organization to prove it is bad for divisional. Likewise, scenario "d" will be run with a divisional organization to prove it is good for divisional and it will be run with a functional organization to prove it is bad for functional. One major focus of this experiment is to determine the types of missions/tasks are better suited for what types of organizations.

Creating the four separate files from the 2DM versions was relatively simple. In a scenario with a functional organization, the asset ownership is based on the functional DM's responsibility. The functional DM would own all assets that are designed to complete tasks that fall under his functional area. For example, the Strike Commander would own and have direct control of all Tomahawk missiles on each platform. Creating the functional organization for both scenario "f" and "d" simply meant changing the ownership of all assets to correspond to the commander of that warfare area. The divisional organization files were easier. Each platform maintained control of all assets located on it. The DM in the divisional organization was simply the Commanding Officer of each platform and forward operating bases for aircraft and SOF teams.

After completing all four XS files, the scenarios were tested again. Ensuring all DMs owned the proper assets

from each platform was very important to the objective of the entire experiment. The file completion for the experiment concluded the scope of this thesis.

VI.   SCENARIO ISSUES AND CONCERNS

A.   TRAINING

Training for the personnel who will play DMs in the experiment is a very important issue. The first training issue is what is called "buttonology". Familiarity with the mouse buttons and how to perform certain tasks is very important. The experiment is designed to test how well DMs perform as far as mission accomplishment, task completion, and DM coordination. The true performance of each team will be difficult to determine if the experiment is conducted having been biased by a DMs inability to properly execute simple tasks. What button does what, how do I launch weapons, how do I zoom in on targets, and how do I select a task are questions that should not be an issue while running the experiment. Eliminating this training issue is crucial to properly conducting the experiment.

The next training issue is understanding the mission. Each player must be well versed on the overall mission of each scenario. A few A2C2 experiments in the past have not focused on a central mission. These experiments focused on DMs attacking the enemy's anti-access capability while protecting various assets including the self-defense of their own platforms and assets. This experiment focuses on an actual mission to be accomplished. The more familiar each team is with the mission the more reliable will be the data collected.

The learning curve of each individual is different. Some will do better because they enjoy video games. Some will do well because they are familiar with the Composite

Warfare Commander concept and the use of naval forces. There are various aspects such as the above mentioned that the researchers cannot control. Ensuring that each player receives the same amount of training and are proficient with the buttonology and mission is the best the facilitators can do to eliminate external bias in the experiment.

B.   ADAPTABILITY

Adaptability is one basis for all A2C2 experiments. The two major organizational structures chosen are divisional and functional. What tends to happen, even in the operational fleet, is that the battle structure never remains purely one or the other. The battle structure tends to take on a hybrid structure possessing characteristics from both organizations depending on the situation. Two underlying sets of question for this experiment are:

- If the organization is not well matched to the mission, what do the decisionmakers do? How do they deal with or adapt to the situation?

- What are the indicators of a situation where the organization should adapt in order to better deal with the scenario?

The answers to these questions are a major focus of Experiment Eight. There is an inherent difficulty in adaptation that must be expressed. The difficulty is part of the DDD software itself.

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The functional organizational structure allows the functional DM to directly control assets he owns on each platform. If he wants to launch 2 Tomahawk missiles, one from the CG and one from a DDG, then he can do this from his terminal without aid from the other DMs. If situations arise (and they will) that will force the DMs to make changes in the organizational structure and pursue a more divisional structure then it is going to be very difficult to do so. Usually in a divisional organization, each DM is given a geographical area that becomes his area of responsibility. That DM is responsible for any mission task or threat that arises in his area. If he requires help from other DMs to complete these tasks then he requests help, but the overall responsibility remains with him. In a functional organization it will be very difficult to split the responsibilities by geographical area because the DM in that area cannot control any assets that do not fall under his functional area. The divisional scenario was designed so that any one DM could complete any one task with minimal or no assistance from the other DMs. The functional scenario was designed so that all tasks can be completed by one DM without assistance from the other DMs.

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VII. CONCLUSION

A. THESIS SUMMARY

This thesis was conducted as a part of the A2C2 research project, a multifaceted program which pursues a continuing effort to examine adaptation in joint command and control organizations. The objective of the project's eighth experiment is to study the adjustments that organizations make when they are confronted with a scenario for which their organizational is ill-suited. The purpose of this thesis was to design, test, and implement two scenarios, one of which would be well-suited for a functional organization and ill-suited for a divisional organization, and vice versa for the other scenario.

The focus questions for Experiment Eight were examined to determine what the two scenarios should accomplish. Research on organizational theory aided in understanding the structure and behavior of the functional and divisional organizations. The formulation of an overall mission was completed to provide a sequence for the teams to follow. Non-critical mission tasks were added to increase realism, introduce complexity and induce coordination and change in organizational structure based on situational workload.

The experiment is set to be run in August 2002 at the Naval Postgraduate School. The team of researchers includes the NPS, University of Connecticut, George Mason University, Carnegie Mellon University, Michigan State University, and APTIMA Inc. The data collected from the experiment will be analyzed and compiled to answer the questions that stand as the basis for the experiment.

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APPENDIX A

A. FUNCTIONAL XS FILE

```
#<<<<< P8-data root file: June 10 2002 >>>>>>>>
decision structure  7
      FLAG    GREEN    BLUE    PURPL    RED    ORNGE    BROWN    INTEL
        0       0       0       0       0       0         0        7
#---------
message file msgsFcn_P8.txt
#
simulation time 2305.0 #time at 38min 25sec
#---------
number_of tasks 275
#---------
simulation scale 500.0
#---------
number_of attributes 3
      Value Time HOSTL
#---------
number_of resources 7
 AAW MINE ASuW BMD STRK SAR SOF
#---------
number_of nets 2
#---------
renew interval 0.5
#---------
random seed  1
#---------
message number 4
#--------
comm epoch 6.0
#---------
comm delay 5.0
#---------
transfer delay 10.0
#---------
attack delay 2.0
#---------
```

```
land area  0.0 200.0 375.0 500.0
land area 375.0 450.0 500.0 500.0
land area 260.0 0.0  320.0 100.0  # Sardenia
land area 420.0 160.0 500.0 205.0 # Sicily
#--------- roads
draw line 50. 300.  100.  205.   2
draw line 50. 300.  195.  205.   2
#--------- SeaBaselocations
#draw circle  100.0 200.0  10.   1
#draw circle  200.0 200.0  10.   1
#--------- AirBaselocations
#draw circle   50.0 300.0  10.   1
#draw circle  150.0 300.0  10.   1
#--------- Miscellaneous cities
draw circle 5.0  205. 1.0   2
draw circle 315. 95.  1.0   2
draw circle 370. 460. 1.0   2
draw circle 430. 200. 1.0   2
#draw circle 320. 200. 1.0   2
draw circle 415. 455. 1.0   2
#--------- Libya city
draw rectangle  390.0  440.0  50. 20.0  2
#--------- country borders
draw line 250. 200.  250.0  500.  3
draw line 300. 450.  300.0  500.  3
draw line 300. 450.  375.0  450.  3
#--------- sea lanes
draw line   0. 125.  375.0  125.  3
draw line 375. 125.  500.0   50.  3
draw line 375. 125.  425.0  300.  3
draw line 425. 300.  425.0  450.  3
draw line 425. 450.  500.0  425.  3
#--------- air corridors
draw line   5. 205. 150.   50.  1
draw line 100. 200. 150.   50.  1
draw line 200. 200. 150.   50.  1
draw line 320. 200. 150.   50.  1
draw line 150.  50. 160.    0.  1
draw line 150.  50. 100.    0.  1
```

```
draw line 100. 200. 315.  95.  1
draw line 320. 200. 315.  95.  1
draw line 400.   0. 315.  95.  1
draw line 500. 380. 315.  95.  1
draw line 370. 460. 500. 275.  1
draw line 430. 200. 415. 455.  1
#---------
penetration number 3
penetration zone   rectangle    0 260.0    0.0  60.0  100.0     # Sardenia
penetration zone   rectangle    1 420.0  160.0  85.0  45.0      # Sicily
penetration zone   circle       2 320.0  200.0  12.0           # Tunis
#
#<<<<<<<<<<<<<<< Platform Class Information >>>>>>>>>>>>>>>
#
platform classes 21
#---------
# platform 0: DestroyerA
platform general 0  S    DDGA  0.000  0
                0  1  3000.000  3.000  20.000
platform resource 0     0  0  0  0  0  0  0
platform range    0
  150.0  35.00  100.00  0.00  10.00
  35.00   8.00  30.00   0.00  15.00
   0.00   0.00   0.00   0.00   0.00
platform accuracy    0
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 1: DestroyerB
platform general 1  S    DDGB  0.000  0
                 0  1  3000.000  3.000  20.000
platform resource 1    0  0  0  0  0  0  0
platform range    1
  150.0  35.00  100.00  0.00  10.00
  35.00   8.00  30.00   0.00  15.00
   0.00   0.00   0.00   0.00   0.00
platform accuracy  1
```

```
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 2: Frigate
platform general 2  S    FFG  0.000  0
                 0 1  3000.000  3.000  20.000
platform resource 2    0  0  0  0  0  0  0
platform range   2
  100.0  35.00  70.00   0.00  10.00
   30.00   8.00  28.00   0.00  15.00
    0.00   0.00   0.00   0.00   0.00
platform accuracy  2
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 3: Cruiser
platform general 3  S    CG  0.000  0
                 0 1  3000.000  3.000  20.000
platform resource 3    0  0  0  0  0  0  0
platform range   3
  180.0  35.00  100.00  0.00  10.00
   40.00   8.00  30.00   0.00  15.00
    0.00   0.00   0.00   0.00   0.00
platform accuracy  3
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 4: aircraft carrier
platform general 4  S    CVN  0.000  0
                 0 1  3000.000  3.000  20.000
platform resource 4    0  0  0  0  0  0  0
platform range   4
  240.0  35.00  150.00  0.00  10.00
```

```
    50.00    8.00   30.00    0.00   20.00
     0.00    0.00    0.00    0.00    0.0
platform accuracy   4
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 5: DestroyerC
platform general 5   S    DDGC   0.000   0
                 0   1   3000.000   3.000   20.000
platform resource 5     0   0   0   0   0   0   0
platform range    5
  150.0   35.00   100.00   0.00   10.00
   35.00    8.00   30.00    0.00   15.00
     0.00    0.00    0.00    0.00    0.00
platform accuracy   5
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 6: E2C (nominally from carrier)
platform general 6   A    E2C   0.00   0
                 0   1   3000.000   3.000   20.000
platform resource 6     0   0   0   0   0   0   0
platform range    6
  250.0   0.00   0.00   0.00   7.5
   60.00   0.00   0.00   0.00   0.0
   30.00   0.00   0.00   0.00   20.0
platform accuracy   6
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 7: fighter aircraft (from CVN/airbase)
platform general 7   A    F18A   3.17   0
                 1   1   900.000   60.000   20.000
```

```
platform resource  7    1  0  0  0  0  0  0
platform attack 7 2
platform range    7
   80.0  20.00  40.00  36.00   3.00 #orig 7.5
   50.0  12.00  25.00   0.00   0.00
    5.0   4.00   2.00   0.00  20.00
platform accuracy    7
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 8: strike a/c package (from CVN/airbase)
platform general 8  A    F18S  3.17  0
                1  1 900.000  60.000  20.000
platform resource  8    0  0  0  0  2  0  0
platform attack 8 1
platform range    8
   80.0  20.00  40.00   0.00   5.00 #orig 7.5
   50.0  12.00  25.00   3.00   0.00
   30.0  24.00  25.00  15.00  20.00
platform accuracy    8
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 9: MH53 (from surface ships)- 18 min endurance
platform general 9  A    MH53  .60  0
                1  1 1100.000  60.000  10.000
platform resource  9    0  1  0  0  0  0  0
platform attack 9 2
platform range    9
   60.0   0.00  30.00   0.00   7.50
   30.0  12.00  15.00   0.00   0.00
   10.0   4.00   5.00   0.00  20.00 #beware of SAMs!
platform accuracy    9
0.0  0.0  0.0
0.0  0.0  0.0
```

```
0.0  0.0  0.0
#
#
# platform 10: HH60 (from surface ships) - 18 min endurance
platform general 10  A    HH60   .60   0
                 1  1 1100.000  60.000  10.000
platform resource  10    0  0  0  0  0  1  0
platform attack 10 1
platform range    10
  60.0   0.00  30.00   0.00   7.50
  30.0  12.00  15.00  10.00   0.00
  12.0   6.00   8.00  10.00   9.00 #beware of SAMs!
platform accuracy   10
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 11: UAV (from surface ships)- 60min endurance
platform general 11  A    UAV   .54   0
                 1  1  3600.000  30.000  5.000
platform resource  11    0  0  0  0  0  0  0
platform range    11
  20.0  10.00  15.00   0.00   7.50
  35.0  15.00  20.00   0.00   0.00
  38.0  24.00  22.00   0.00  20.00
platform accuracy   11
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 17: FGTR (attack boats from surface ships)- 20min endurance
platform general 17  S    FGTR   .40   0
                 1  1  1200.000  30.000  10.000
platform resource  17    0  0  1  0  0  0  0
platform attack 17 2
platform range    17
  10.0   0.00   5.00   0.00   0.00
```

```
   35.0   20.00   30.00   15.00   10.00
    0.0    0.00    0.00    0.00    0.00
platform accuracy    17
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 18: SOF/SEALS (pre-inserted)- infinite endurance
platform general 18   G     SOF   .60   0
                   1   1   3600.000   30.000   10.000
platform off_route 18 1
platform resource  18    0   0   0   0   0   0   1
platform range    18
   10.0    0.00    5.00    0.00    0.00
    0.0    0.00    0.00    0.00    0.00
   20.0   10.00   18.00    8.00    5.00
platform accuracy    18
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
# --------------------------------
# the following are the weapons
# --------------------------------
# platform 12: SM2  (standard anti-air missile)
platform general 12   A    SM2   5.28   0
                   0   0   18.9   10.0   1.0
platform weapon 12 1
platform resource  12    1   0   0   0   0   0   0
platform range    12
   0.0   0.0   0.00   6.00   0.00
   0.0   0.0   0.00   0.00   0.00
   0.0   0.0   0.00   0.00   0.00
platform accuracy    12
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
#
```

```
#
# platform 13: ABM  (standard anti-air/BMD missile)
platform general 13  A    ABM  6.94  0
                 0   0  12.2  10.0  1.0
platform weapon 13 1
platform resource  13    1  0  0  1  0  0  0
platform range    13
  0.0   0.0   0.00 12.00   0.00
  0.0   0.0   0.00   0.00   0.00
  0.0   0.0   0.00   0.00   0.00
platform accuracy   13
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
#
#
# platform 14: TLAM  (tomahawk missile)
platform general 14  A    TLAM  2.08  0
                 0   0  173.0  10.0  20.0
platform weapon 14 1
platform resource  14    0  0  0  0  1  0  0
platform range    14
  0.0   0.0   0.00   0.00   0.00
  0.0   0.0   0.00   0.00   0.00
  0.0   0.0   0.00   5.00   0.00
platform accuracy   14
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
#
#
# platform 15: TTOM  (steerable tactical tomahawk)
platform general 15  A    TTOM  2.08  0
                 0   0  240.0  10.0  20.0
platform resource  15    0  0  0  0  1  0  0
platform range    15
  0.0   0.0   0.00   0.00   0.00
  0.0   0.0   0.00   0.00   0.00
  0.0   0.0   0.00  15.00   0.00
```

```
platform accuracy    15
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
#
#
# platform 16: HARP (harpoon anti-ship missile)
platform general 16  A    HARP  1.39  0
                  0   0   43.0  10.0  5.0
platform weapon 16 1
platform resource  16     0  0  1  0  0  0  0
platform range    16
  0.0   0.0   0.00   0.00   0.00
  0.0   0.0   0.00   3.00   0.00
  0.0   0.0   0.00   0.00   0.00
platform accuracy    16
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
#
#
# platform 19: forward operating base for SOF, also "intel"
platform general 19  G    FOB   0.0   0
                  1   1 3000.000  3.000  20.000
platform resource  19     1 1 1 1 1 1 1
platform range    19
0.00 0.00   0.00   0.00   0.00
0.00 0.00   0.00   0.00   0.00
0.00 0.00   0.00   0.00   0.00
platform accuracy    19
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 20: forward air base for F18, maybe also "intel"
platform general 20  G    AOF   0.0   0
                  1   1 3000.000  3.000  20.000
platform resource  20     0 0 0 0 0 0 0
```

```
platform range    20
  200.0  0.0  50.0  0.0  0.0
    0.0  0.0   0.0  0.0  0.0
    0.0  0.0   0.0  0.0  0.0
platform accuracy   20
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#---- platform-subplatform structure ----
#
# air BASE with fighters, strike a/c
platform subplatform 20 2
      F18A    F18S
       2       2      # number
       4       1      # owner
# -----------------------------------
#
# FOB with the SOF teams possibly owned by 3 different DMs
platform subplatform 19 3
      SOF     SOF     SOF
       1       1       1      # number
       6       6       6      # owner
# -----------------------------------
#
# CVN carrying fighters, strike a/c, HH60, UAV, FGTR, MH53
platform subplatform  4  6
      F18A    F18S   HH60    UAV    FGTR    MH53
       2       2      1      1      1       1 # number
       4       1      6      3      5       5 # owner
# -----------------------------------
#
# DDGA carrying SM2, ABM, TLAM, HARP, TTOM, HH60, UAV, FGTR
platform subplatform  0  8
    SM2  ABM  TLAM  HARP  TTOM  HH60  UAV  FGTR
     6    3    6     2     4     1    1    1    # number
#    1    0    0     0     0     1    0    0    # owner
     4    2    1     5     2     6    3    5
# -----------------------------------
```

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```
#
# DDGB carrying SM2, ABM, TLAM, HARP, TTOM, HH60, UAV, FGTR
platform subplatform  1  8
    SM2   ABM   TLAM   HARP   TTOM   HH60   UAV   FGTR
     6     3     6      2      4      1     1     1    # number
#    0     0     0      0      0      0     0     0    # owner
     4     2     1      5      2      6     3     5
# ----------------------------------
#
# CG carrying SM2, ABM, TLAM, HARP, MH53, UAV, FGTR, HH60
platform subplatform  3  8
    SM2   ABM   TLAM   HARP   MH53   UAV   FGTR   HH60
     6     3     6      2      1      1     1      1   # number
#    0     0     0      0      0      0     0      0   # owner
     4     2     1      5      5      3     5      6
# ----------------------------------
#
# FFG carrying SM2, HARP, MH53, UAV, FGTR,  HH60
platform subplatform  2  6
    SM2   HARP   MH53  HH60   UAV   FGTR
     4     2     1      1      1     1   # number
#    0     0     0      0      0     0   # owner
     4     5     5      6      3     5
# ----------------------------------
#
# DDGC carrying SM2, ABM, TLAM, HARP, TTOM, HH60, UAV, FGTR
platform subplatform  5  8
    SM2   ABM   TLAM   HARP   TTOM   HH60   UAV   FGTR
     6     3     6      2      4      1     1     1    # number
#    0     0     0      0      0      0     0     0    # owner
     4     2     1      5      2      6     3     5
# ------ end of platform subplatform structure ---------
#
#<<<<<<<<<<<<< Task Class Information >>>>>>>>>>>
number_of clusters 22
#
task cluster  0 G NB
task cluster  1 G CMD truck.icon
task cluster  2 S ?? ship.icon
```

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```
task cluster  3 G CDL artillery.icon
task cluster  4 G SML silkworm.icon
task cluster  5 A ?? air.icon
task cluster  6 G AB
task cluster  7 G SAM sam.icon
task cluster  8 A CDM missle.icon
task cluster  9 A MIS silkworm.icon
task cluster 10 S MIN mines.icon
task cluster 11 A XOC missle.icon
task cluster 12 G EW
task cluster 13 S S&R cross.icon
task cluster 14 G RGF tank.icon
task cluster 15 G SML silkworm.icon
task cluster 16 G BR  bridge.icon
task cluster 17 A TSK
task cluster 18 S TSK task.icon   #complex sea
task cluster 19 G UT task.icon   #UT ground
task cluster 20 S UT task.icon   #UT sea
task cluster 21 G SAM sam.icon
#
task classes 41
#---------
# task 0: Naval Base (East)
task general 0  G  NBE  0.0  0.1  9  norfolk.icon
cluster member 0 0
task name 0 East_Naval_Base
task mean  0  50.0  40.0  1.0
task attack  0  0   1 1 1 1 1 1 1 0
task mapping 0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    2.0
task stealth 0  17  20.0  15.0  18.0  12.0  0.0 #so FGTR can attack
task stealth 0  19  600.0  600.0  600.0  0.0  0.0
#
```

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```
# task 1: Naval Base (West)
task general 1  G  NBW  0.0  0.1  9  norfolk.icon
cluster member 1 0
task name 1 West_Naval_Base
task mean  1  50.0  50.0  1.0
task attack  1  0   1 1 1 1 1 1 1 0
task mapping 1
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    6.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 1  17  20.0  15.0  18.0  12.0  0.0 #so FGTR can attack
task stealth 1  19  600.0  600.0  600.0  0.0  0.0
#
# task 2: Command center
task general 2  G  CMD  0.0  0.1  9  truck.icon
cluster member 2 1
task name 2 command_ctr
task mean 2  25.0  20.0  1.0
task attack  2  0  1 1 1 1 1 1 1 0
task mapping 2
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    2.0
task stealth 2  19  600.0  600.0  600.0  0.0  0.0
#
# task 3: sea contacts (enemy destroyer)
task general 3  S  DG  0.14  0.1  1  ship.icon
cluster member 3 2
task name 3 Enemy_Destroyer
task mean 3  25.0  10.0  1.0
task attack  3  0  1 1 1 1 1 1 1 0
```

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```
task mapping 3
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     2.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
# enemy destroyer can fire missles at 25 miles out
task stealth 3  0    35.0   8.0   30.0   0.0   25.0
task stealth 3  1    35.0   8.0   30.0   0.0   25.0
task stealth 3  2    30.0   8.0   28.0   0.0   25.0
task stealth 3  3    40.0   8.0   30.0   0.0   25.0
task stealth 3  4    50.0   8.0   30.0   0.0   25.0
task stealth 3  5    35.0   8.0   30.0   0.0   25.0
#
# task 4: sea contacts (fast patrol boats)
task general 4   S   PT   0.20   0.1   2   ship.icon
cluster member 4 2
task name 4 Enemy_Patrol_Boat
task mean 4   5.0   5.0   1.0
task attack  4   0   1 1 1 1 1 1 1 0
task mapping 4
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     1.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
#
# task 5: ground (Coastal Defense missile battery)
# made a TF = 5 to indicate time critical value
task general 5   G   CDL   0.09   0.1   5   artillery.icon
cluster member 5 3
task name 5 CD_Launcher
task mean  5   2.0   5.0   1.00
task attack  5   0   1 1 1 1 1 1 1 0
task mapping 5
```

```
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 6: ground (SCUD missile launcher)
# made a TF = 5 to indicate time critical value
task general 6  G  SML  0.06  0.1  5  silkworm.icon
cluster member 6 4
task name 6 SCUD_launcher
task mean  6    5.0  10.0  1.00
task attack  6  0  1 1 1 1 1 1 1 0
task mapping 6
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 7: air attackers of tailorable size
task general 7  A  AC  2.0  0.1  3  air.icon
cluster member 7 5
task name 7 hostile_air
task mean 7  5.0  5.0  1.00
task attack  7  0  1 1 1 1 1 1 1 0
task mapping 7
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
```

```
# task 8: Air Base (East)
task general 8  G  ABE  0.0  0.1  9  dullas.icon
cluster member 8 6
task name 8 Air_Base_East
task mean  8  50.0  30.0  1.0
task attack  8  0  1 1 1 1 1 1 1 0
task mapping 8
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    2.0
task stealth 8  19  600.0  600.0  600.0  0.0  0.0
#
# task 9: Air Base (West)
task general 9  G  ABW  0.0  0.1  9  dullas.icon
cluster member 9 6
task name 9 Air_Base_West
task mean  9  50.0  50.0  1.0
task attack  9  0  1 1 1 1 1 1 1 0
task mapping 9
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    6.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 9  19  600.0  600.0  600.0  0.0  0.0
#
# task 10: SAM sites- stationary and protected
task general 10  G  SAM  0.0  0.1  3  sam.icon
cluster member 10 7
task name 10 SAM_site
task mean 10  5.0  20.0  1.00
task attack  10  0  1 1 1 1 1 1 1 0
task mapping 10
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 10   7 30.0   24.00   28.00    0.00   20.00   #F18A
task stealth 10   8 30.0   24.00   28.00   15.00   20.00   #F18S
task stealth 10   9 25.0   25.00   25.00    0.00   20.00   #MH53
task stealth 10  10 15.0   15.00   15.00    0.00    7.00   #HH60
task stealth 10  11 40.0   24.00   38.00    0.00   20.00   #UAV
#
# task 11: air contacts (commair)
task general 11   A   NU 1.25   0.1   0   smiley.icon
cluster member 11 5
task name 11 commercial_air
task mean 11   75.0   5.0   0.00
task attack   11   0   1 1 1 1 1 1 1 0
task mapping 11
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
#
# task 12: sea contacts (merchant)
task general 12   S   NU   0.09   0.1   0   smiley.icon
cluster member 12 2
task name 12 merchant_ship
task mean   12   75.0   5.0   0.00
task attack   12   0   1 1 1 1 1 1 1 0
task mapping 12
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
```

```
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
#
# task 13: missile - spawned by a CD launcher
# may wish to make this TF=2 and type =S
# combine with class 16?
task general 13  A   CDM  1.00  0.1  3  missle.icon
cluster member 13 8
task name 13 CD_missle
task mean  13   5.0  5.0  1.00
task attack 13  0   1 1 1 1 1 1 1 0
task mapping 13
0.0  0.0  0.0     1.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
task stealth 13    6   250.  0.   0.   0.0  0.0
task stealth 13    7   20.   0.  10.  36.0  0.0
task stealth 13    8   20.   0.  10.   0.0  0.0
task stealth 13    9   15.   0.   8.   0.0  0.0
task stealth 13   10   15.   0.   8.   0.0  0.0
task stealth 13   11   10.   0.   5.   0.0  0.0
#
# task 14: SCUD missile - fired by a SCUD launcher
task general 14  A   MIS  1.67  0.1  1  silkworm.icon
cluster member 14 9
task name 14 SCUD_missle
task mean  14   10.0  5.0  1.00
task attack 14  0   1 1 1 1 1 1 1 0
task mapping 14
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     1.0
0.0  0.0  0.0     0.0
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
#
# task 15: sea contacts ("drifting" mines)
task general 15   S   MIN   .03   0.1   2   mines.icon
cluster member 15 10
task name 15 mine_field
task mean 15   10.0   10.0   1.00
task attack  15   0   1 1 1 1 1 1 1 0
task mapping 15
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 15   6      0.0   0.0      0.0   0.0      0.0
task stealth 15   7      0.0   0.0      0.0   0.0      0.0
task stealth 15   8      0.0   0.0      0.0   0.0      0.0
task stealth 15   9      13.0   0.0      0.0   10.0   0.0   #MH53
task stealth 15   10   2.0   0.0      0.0   0.0      0.0
task stealth 15   11   0.0   0.0      0.0   0.0      0.0
task stealth 15   17   20.0 12.0   18.0   0.0   13.0   #FGTR
#
# task 16: Exocet missile - fired by Destroyer
# may wish to make this TF=2 and type =S
task general 16   A   XOC   1.3   0.1   3   missle.icon
cluster member 16 11
task name 16 Exocet
task mean  16   5.0   5.0   1.00
task attack 16   0    1 1 1 1 1 1 1 0
task mapping 16
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
```

```
0.0   0.0   0.0     0.0
task stealth 16    6   250.   0.   0.   0.0   0.0
task stealth 16    7   20.   0.   10.  36.0   0.0
task stealth 16    8   20.   0.   10.   0.0   0.0
task stealth 16    9   15.   0.    8.   0.0   0.0
task stealth 16   10   15.   0.    8.   0.0   0.0
task stealth 16   11   10.   0.    5.   0.0   0.0
#
# task 17: Possible hostile air (yes)
task general 17   A   PH   1.75   0.1   3   air.icon
cluster member 17 5
task name 17 possible_hostile
task mean 17    10.0   5.0   1.00
task attack  17   0   1 1 1 1 1 1 1 0
task mapping 17
0.0   0.0   0.0     1.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
# these go after big ships -- not aircraft
task stealth 17    6   250.   0.    0.   0.0   0.0
#task stealth 17    7   80.   20.   40.  36.0   3.0
task stealth 17    8   80.   20.   40.   0.0   3.0
task stealth 17    9   60.    0.   30.   0.0   3.0
task stealth 17   10   60.    0.   30.   0.0   3.0
task stealth 17   11   20.   10.   15.   0.0   3.0
#
# task 18: Possible hostile air (no)
task general 18   A   PH   1.75   0.1   0   air.icon
cluster member 18 5
task name 18 possible_hostile
task mean 18   75.0   5.0   0.00
task attack  18   0   1 1 1 1 1 1 1 0
task mapping 18
0.0   0.0   0.0     1.0
0.0   0.0   0.0     0.0
```

```
0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

#

# task 19: Possible hostile ship (yes)

task general 19  S   PH   .20   0.1   2   ship.icon

cluster member 19 2

task name 19 possible_hostile

task mean 19    10.0   5.0   1.00

task attack  19  0   1 1 1 1 1 1 1 0

task mapping 19

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     1.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

#

# task 20: Possible hostile ship (no)

task general 20  S   PH   .20   0.1   0   ship.icon

cluster member 20 2

task name 20 possible_hostile

task mean 20   75.0   5.0   0.00

task attack  20  0   1 1 1 1 1 1 1 0

task mapping 20

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     1.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

#

# task 21: MOBILE SAM sites- protected

task general 21  G   SA3   0.06   0.1   3   sam.icon

cluster member 21 21
```

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```
task name 21 mobile_SAM

task mean 21   5.0   20.0   1.00

task attack 21   0   1 1 1 1 1 1 1 0

task mapping 21

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     2.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

task stealth 21   7 30.0   24.00   25.00     0.00   10.00   #F18A

task stealth 21   8 30.0   24.00   26.00   15.00   10.00   #F18S

task stealth 21   9 25.0   25.00   25.00     0.00   12.00   #MH53

task stealth 21 10 15.0   15.00   15.00     0.00     5.00   #HH60

task stealth 21 11 30.0   25.00   25.00     0.00   12.00   #UAV

task stealth 21 14   0.0   0.0   0.0   0.0   0.0 #can't hit with TLAM

task stealth 21 15   0.0   0.0   0.0   0.0   0.0 #can't hit with TTOM

#

# task 22: intel on possible launch

task general 22   G   EW   0.0   0.1   0   task.G.icon

cluster member 22 12

task name 22 possible_launch

task mean 22     0.0   2.0   0.00

task attack   22   0   0 0 0 0 0 0 0 0

task mapping 22

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

0.0   0.0   0.0     0.0

task stealth 22   19     600.0     0.0     0.0     0.0   0.0

#

# task 23: rescue effort at sea (may wish to make TF=9)

task general 23   S   S&R   0.0   0.1   5   cross.icon

cluster member 23 13

task name 23 rescue_effort
```

```
task mean 23    10.0  10.0  0.00
task attack  23   0  1 1 1 1 1 1 1 0
task mapping 23
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     2.0
0.0  0.0  0.0     0.0
task stealth 23  10     30.0  15.0  25.0  10.0  0.0
task stealth 23  19    700.0   700.0  700.0   0.0  0.0
#
# task 24: air recon
task general 24  A  REC  1.5  0.1  1  air.icon
cluster member 24 5
task name 24 recon_air
task mean 24  2.0  5.0  1.00
task attack  24   0  1 1 1 1 1 1 1 0
task mapping 24
0.0  0.0  0.0     1.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
#
# task 25: enemy ground unit
task general 25  G  RGF  0.0  0.1  2  tank.icon
cluster member 25 14
task name 25 Enemy_ground_force
task mean 25    5.0  30.0  1.00
task attack  25   0  1 1 1 1 1 1 1 0
task mapping 25
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
```

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```
0.0  0.0  0.0    3.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 25  6   5.0  0.0    0.0   0.0   0.0
task stealth 25  7   3.0  0.0   2.50   0.0   2.0
task stealth 25  8   3.0  0.0   2.50  10.0   2.0
task stealth 25  9   3.0  0.0   2.50   0.0   2.0
task stealth 25  10  3.0  0.0   2.50   0.0   2.0
task stealth 25  11  20.0  0.0   15.0   0.0   2.0  #UAV can see them
task stealth 25  18  25.0 22.0   20.0   8.0  15.0  #danger for SOF
#
# task 26: ground (SCUD missile SECOND launcher)
# made a TF = 5 to indicate time critical value
task general 26  G   SML   0.06   0.1   5   silkworm.icon
cluster member 26 15
task name 26 SCUD_launcher
task mean  26   2.0  10.0  1.00
task attack  26   0   1 1 1 1 1 1 1 0
task mapping 26
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 27: "nothing there" sea report confuse with S&R -- if needed
task general 27  S   S&R   0.0   0.1   0   cross.icon
cluster member 27 13
task name 27 rescue_effort
task mean  27   0.0  2.0  0.00
task attack 27   0   0 0 0 0 0 0 0 0
task mapping 27
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 27  10     30.0   15.0   25.0   10.0   0.0
task stealth 27  19    700.0    0.0    0.0    0.0   0.0
#
# task 28: a major bridge
task general 28  G   BR   0.0   0.1   9   bridge.icon
cluster member 28 16
task name 28 major_bridge
task mean 28   30.0   30.0   1.0
task attack   28   0   1 1 1 1 1 1 1 0
task mapping 28
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
task stealth 28   19   600.0   600.0   600.0   0.0   0.0
#
# task 29: final seaport
task general 29  G   PRT   0.0   0.1   9   norfolk.icon
cluster member 29 0
task name 29 capture_port
task mean 29   50.0   40.0   1.0
task attack   29   0   1 1 1 1 1 1 1 0
task mapping 29
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
task stealth 29   17   20.0   15.0   18.0   12.0   0.0 #so FGTR can attack
task stealth 29   19   600.0   600.0   600.0   0.0   0.0
#
# task 30: a complex AIR task
```

```
task general 30  A  TSK  0.0  0.1  5  crusty.icon
cluster member 30 17
task name 30 complex_task
task mean 30  40.0  30.0  1.0
task attack  30  0  1 1 1 1 1 1 1 0
task mapping 30
0.0  0.0  0.0    3.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 30  19  600.0  600.0  600.0  0.0  0.0
#
# task 31: a complex SEA task-1
task general 31  S  TSK  0.0  0.1  5  crusty.icon
cluster member 31 18
task name 31 complex_task
task mean 31  40.0  30.0  1.0
task attack  31  0  1 1 1 1 1 1 1 0
task mapping 31
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    3.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 31  16  0.0  0.0  0.0  0.0  0.0  # can't use HARP
task stealth 31  19  600.0  600.0  600.0  0.0  0.0
#
# task 32: a complex SEA task-2
task general 32  S  TSK  0.0  0.1  9  take.icon
cluster member 32 18
task name 32 complex_task
task mean 32  40.0  30.0  1.0
task attack  32  0  1 1 1 1 1 1 1 0
task mapping 32
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 32   19   600.0   600.0   600.0   0.0   0.0
#
# task 33: a UT GROUND task
task general 33   G   EVA   0.0   0.1   5   cross.icon
cluster member 33 19
task name 33 evacuate wounded
task mean 33   20.0   30.0   0.0
task attack   33   0   1 1 1 1 1 1 1 0
task mapping 33
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      3.0
0.0   0.0   0.0      0.0
task stealth 33   10    15.0     6.0     8.0   10.0   0.0
task stealth 33   19   700.0   700.0   700.0   0.0   0.0
#
# task 34: a UT SEA task-1
task general 34   S   GUN   0.20   0.1   1   ship.icon
cluster member 34 2
task name 34 gun_runner
task mean 34   10.0   20.0   1.0
task attack   34   0   1 1 1 1 1 1 1 0
task mapping 34
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
```

```
0.0  0.0  0.0    0.0
#task stealth 34  19  600.0  600.0  600.0  0.0  0.0
#
# task 35: a UT SEA task-2
task general 35  S  UT  0.0  0.1  9  take.icon
cluster member 35 20
task name 35 unanticipated_task
task mean 35  50.0  60.0  1.0
task attack  35  0  1 1 1 1 1 1 1 0
task mapping 35
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 35  19  600.0  600.0  600.0  0.0  0.0
#
# task 36: a UT SEA task-3
task general 36  S  UT  0.0  0.1  9  take.icon
cluster member 36 20
task name 36 unanticiapted_task
task mean 36  50.0  60.0  1.0
task attack  36  0  1 1 1 1 1 1 1 0
task mapping 36
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 36  19  600.0  600.0  600.0  0.0  0.0
#
# task 37: Enemy air defenders
task general 37  A  CAP  2.0  0.1  2  air.icon
cluster member 37 5
task name 37 enemy_CAP
```

```
task mean 37   10.0   20.0   1.00
task attack   37   0   1 1 1 1 1 1 1 0
task mapping 37
0.0   0.0   0.0      3.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 37   7   50.0   20.00   40.00   36.00    20.00
task stealth 37   8   50.0   20.00   40.00   0.00    27.00
#
# task 38: Hostile air (yes) of a different nature
task general 38   A   PH   1.75   0.1   3   air.icon
cluster member 38 5
task name 38 possible_hostile
task mean 38     5.0   5.0   1.00
task attack   38   0   1 1 1 1 1 1 1 0
task mapping 38
0.0   0.0   0.0      2.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
# these go after big ships -- not aircraft
task stealth 38    6   250.   0.    0.   0.0   0.0
#task stealth 38    7   80.   20.   40.  36.0   3.0
task stealth 38    8   80.   20.   40.   0.0   3.0
task stealth 38    9   60.    0.   30.   0.0   3.0
task stealth 38   10   60.    0.   30.   0.0   3.0
task stealth 38   11   20.   10.   15.   0.0   3.0
#
# task 39: Hostile ship (yes) of a different nature
task general 39   S   PH   .20   0.1   2   ship.icon
cluster member 39 2
task name 39 possible_hostile
```

```
task mean 39   5.0  2.0  1.00

task attack  39  0  1 1 1 1 1 1 1 0

task mapping 39

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    2.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

#

# task 40: SAM clusters

task general 40  G  SA6  0.06  0.1  3  sam.icon

cluster member 40 7

task name 40 SAM_cluster

task mean 40  5.0  20.0  1.00

task attack 40  0  1 1 1 1 1 1 1 0

task mapping 40

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    2.0

0.0  0.0  0.0    0.0

0.0  0.0  0.0    0.0

#aircraft cannot get within 38 miles

task stealth 40   7 55.0  25.00  55.00   0.00  38.00  #F18A

task stealth 40   8 55.0  25.00  55.00  15.00  38.00  #F18S

task stealth 40   9 55.0  25.00  55.00   0.00  38.00  #MH53

task stealth 40  10 25.0  25.00  25.00   0.00   9.00  #HH60

task stealth 40  11 55.0  25.00  55.00   0.00  38.00  #UAV

#

# ------------------------

# TASK HELP INFORMATION

#

task help 0 3

Capturing NBE will require 2 SOF teams. Note

the prerequisites required before completing

this task.
```

```
#
task help 1 3
Destroying this naval base (NBW) will require
a coordinated attack using 6 STRK units. The
time window is 40 seconds.
#
task help 2 2
In order to neutralize the enemy CMD CTR it will
require 2 SOF teams.
#
task help 3 3
This is an enemy destroyer capable of launching
surface to surface missiles and laying mines.
2 Anti-Surface units are required to destroy this platform.
#
task help 4 2
This is an enemy fast patrol boat.  1 Anti-Surface
unit is required to destroy this platform.
#
task help 5 3
This is an enemy Coastal Defense Laucher capable of launching cruise
missiles at surface targets.  1 STRK unit is required to
destroy this target.
#
task help 6 3
This is a Scud Missile Launcher. 1 STRK unit is required
to destroy this target.  Be careful, some are protected by
Surface to Air Missile Launchers.
#
task help 7 2
This is an enemy fighter aicraft. 1 Anti-Air unit is required
to destroy this platform.
#
task help 8 4
Capturing this Air Base (ABE) will require 2 SOF teams.
Beware of enemy ground forces when using the SOF teams.
Note any prerequisites required to be completed before
beginning this task.
#
```

```
task help 9 3
Destroying this Air Base (ABW) will require a coordintaed
attack using 6 STRK units.  Note any prerequisites required
to be completed before beginning this task.
#
task help 10 3
This is an enemy surface to air missile site.  Usually guarding
such places as Air Bases and Scud Missile Launcher sites. 2 STRK
units are required to destroy this target.
#
task help 11 2
This is neutral commercial air.  There are penalties for firing
on neutral platforms.
#
task help 12 2
This is neutral commercial merchant shipping.  There are penalties
for firing on neutral platforms.
#
task help 13 2
This is an enemy coastal defense missile launched from a coastal defense
launcher. 1 Anti-Air unit is rquired to detroy this target.
#
task help 14 2
This is an enemy Scud Missile most likely targeting one of the neutral
countries. 1 Anti-Ballistic Missile is required to destroy this target.
#
task help 15 2
This is an enemy mine field.  2 Anti-Mine units are required to remove
and safely detonate these mines.
#
task help 16 2
This is an Exocet missile most likely fired by an enemy Destroyer.
1 Anti-Air unit is required to destroy this target.
#
task help 17 3
This is a possible hostile aircraft.  You must get positive ID on
this asset in order to determine if it is actually hostile or not.
There are penalties for firing on non-hostile units.
#
```

```
task help 18 3

This is a possible hostile aircraft.  You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 19 3

This is a possible hostile ship.  You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 20 3

This is a possible hostile ship.  You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 21 4

This is a mobile Surface to Air Missile Site.  Since the exact location

may have changed since the last intelligence was received, it is required
to use

Strike Aircraft to destroy this target.  2 STRK units (1 F18-S) are
required

to destroy this target.

#

task help 22 2

This is an early warning on a possible SCUD launch received from
intelligence.

Investigate with ISR in order to locate and destroy the Scud Launcher.

#

task help 23 2

This is a Search and Rescue (SAR) effort.  2 SAR units are required to

successfully complete this task.

#

task help 24 2

This is enemy reconnassaince aircraft.  This contact has shown no
aggression

towards our forces. If you wish to destroy it use 1 Anti-Air unit.

#

task help 25 2

This is an enemy ground force.  3 STRK units are required to destroy

these enemy forces.

#
```

task help 26 3

This is a SCUD Missile Launcher. 1 STRK unit is required

to destroy this target. Be careful, some are protected by

Surface to Air Missile Launchers.

#

task help 27 1

This is believed to be a false distress signal.

#

task help 28 3

This is a key bridge which provides a link to one or more of the enemy's

bases and fortifications. 2 SOF teams are required to rig small
explosives

and destroy the bridge.

#

task help 29 4

This is the port where the government official are being held. You must

capture this port and free the hostages. 2 SOF teams are required to
complete

this task. Note any prerequisites required to be completed before
beginning

this task.

#

task help 30 3

This is an enemy air strip fortified with enemy fighter aircraft. Detroy
the air

strip patrol to prevent the launch of enemy aircraft. 3 Anti-Air units
are required

to complete this task.

#

task help 31 3

This is an enemy surface shipping blockade used to prevent free travel of
merchant

and friendly shipping. Detroy this blockade. 3 units of Anti-Surface
are required

to complete this task

#

task help 34 3

This ship is trying to run weapons to the Seaport in the occupied

country. Destroy it before it reaches the port to resupply enemy forces.

2 Anti-Surface units are required to destroy this platform.

#

task help 37 2

This is an enemy air attack wave whose mission is to defend valuable
enemy assets.

2 Anti-Air units are required to destroy this platform.

#

task help 38 3

This is a possible hostile aircraft. You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 39 3

This is a possible hostile ship. You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 40 4

This is a surface to air missile site cluster designed to provide 360
degrees

of coverage to a valuable enemy asset. 2 STRK units are required to
destroy

this target. Note that the valuable asset being protected by this
cluster of

SAM sites will not be visible to your sensors until this cluster is
detroyed.

#

----

task penetration 0   0 0 0

task penetration 1   0 0 0

task penetration 2   0 0 0

task penetration 3   0 0 0

task penetration 4   0 0 0

task penetration 5   0 0 0

task penetration 6   0 0 0

task penetration 7   0 0 0

task penetration 8   0 0 0

task penetration 9   0 0 0

task penetration 10   0 0 0

task penetration 11   0 0 0

task penetration 12   0 0 0

task penetration 13   0 0 0

task penetration 14   1 1 1

task penetration 15   0 0 0

```
task penetration 16  0 0 0
task penetration 17  1 1 0
task penetration 18  0 0 0
task penetration 19  0 0 0
task penetration 20  0 0 0
task penetration 21  0 0 0
task penetration 22  0 0 0
task penetration 23  0 0 0
task penetration 24  0 0 0
task penetration 25  0 0 0
task penetration 26  0 0 0
task penetration 27  0 0 0
task penetration 28  0 0 0
task penetration 29  0 0 0
task penetration 34  0 0 1
task penetration 37  0 0 0
task penetration 38  0 0 0
task penetration 39  0 0 0
#
end_of_class_info
#
#<<<<<<<<<<<<<<< State Information >>>>>>>>>>>>>>>
#
platform number   10
# ---------- PLATFORM LOCATIONS ---------------
platform definition  1  CVN    1  200.00 100.00
platform definition  2  DDGA   2  120.00 150.00
platform definition  3  DDGB   3  430.00 240.00
platform definition  4  CG     4  280.00 150.00
platform definition  5  FFG    5  440.00 380.00
platform definition  6  DDGC   6  370.00 150.00
# -------------------------------------------
platform definition  7  E2C    4  200.00 150.00
platform definition  8  E2C    4  400.00 250.00
platform definition  9  AOF    0  430.00 197.00
platform definition  0  FOB    0  100.00 330.00
#
#---------------------------------
#<<<<<<<<TASK DEFINITIONS>>>>>>>>>>>>
```

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```
#-----------------------------------
# Major mission tasks (bases, cmd ctr, bridge, ...)
#-----------------------------------
 task definition  200  02 0 0  #command ctr
#
 task definition  201  28 0 0  #bridge1
#
 task definition  202  28 0 0  #bridge2
#
 task definition  203  01 0 0  #NBW
#
 task definition  204  28 0 0
#
 task definition  205  15 0 0  #mines
#
 task definition  206  15 0 0  #mines @ NBE
#
 task definition  212  29 0 0  #Tunis (final objective)
#
 task definition  213  31 0 0
#
 task definition  211  00 0 0  #NBE
#
 task definition  207  21 0 0  #SA3
#
 task definition  208  21 0 0  #SA3
#
 task definition  209  09 0 0  #ABW
#
 task definition  210  08 0 0  #ABE
#
 task definition  214  29 0 0
#
 task definition  215  29 0 0
#-----------------------------------
# Fast Patrol Craft (N=16)
#-----------------------------------
 task definition  216  04 0 0
#
```

```
 task definition  217  04 0 0
#
 task definition  218  04 0 0
#
 task definition  219  04 0 0
#
 task definition  220  04 0 0
#
 task definition  221  04 0 0
#
 task definition  222  04 0 0
#
 task definition  223  04 0 0
#
 task definition  224  04 0 0
#
 task definition  225  04 0 0
#
 task definition  226  04 0 0
#
 task definition  227  04 0 0
#
 task definition  228  04 0 0
#
 task definition  229  04 0 0
#
 task definition  230  04 0 0
#
 task definition  231  04 0 0
#----------------------------------
# Coastal Defense missile launchers (N=22)
#----------------------------------
 task definition  232  5 0 0
#
 task definition  233  5 0 0
#
 task definition  234  5 0 0
#
 task definition  235  5 0 0
```

```
#
 task definition  236  5 0 0
#
 task definition  237  5 0 0
#
 task definition  238  5 0 0
#
 task definition  239  5 0 0
#
 task definition  240  5 0 0
#
 task definition  241  5 0 0
#
 task definition  242  5 0 0
#
 task definition  243  5 0 0
#
 task definition  244  5 0 0
#
 task definition  245  5 0 0
#
 task definition  246  5 0 0
#
 task definition  247  5 0 0
#
 task definition  248  5 0 0
#
 task definition  249  5 0 0
#
 task definition  250  5 0 0
#
 task definition  251  5 0 0
#
 task definition  252  5 0 0
#
 task definition  253  5 0 0
#------------------------------------
# Red Ground forces (N=4)
#------------------------------------
```

```
 task definition  254  25 0 0
#
 task definition  255  25 0 0
#
 task definition  256  25 0 0
#
 task definition  257  25 0 0
#---------------------------------
# Complex Air Tasks (N=2)
#---------------------------------
 task definition  258  30 0 0
#
 task definition  259  30 0 0
#---------------------------------
# Complex Sea Tasks (N=2)
#---------------------------------
 task definition  260  31 0 0
#
 task definition  261  31 0 0
#---------------------------------
# SCUD missile launchers (N=28, most in pairs)
#---------------------------------
 task definition  262  6 0 0
#
 task definition  263  26 0 0 #S262
#
 task definition  264  6 0 0
#
 task definition  265  26 0 0 #S264
#
 task definition  266  6 0 0
#
 task definition  267  26 0 0 #S266
#
 task definition  268  6 0 0
#
 task definition  269  26 0 0 #S268
#
 task definition  270  6 0 0
```

```
#
 task definition  271  26 0 0 #S270
#
 task definition  272  6 0 0
#
 task definition  273  26 0 0 #S272
#
 task definition  274  6 0 0
#
 task definition  275  26 0 0 #S274
#
 task definition  276  6 0 0
#
 task definition  277  26 0 0 #S276
#
 task definition  278  6 0 0
#
 task definition  279  26 0 0 #S278
#
 task definition  280  6 0 0
#
 task definition  281  26 0 0 #S280
#
 task definition  282  6 0 0
#
 task definition  283  26 0 0 #S282
#
 task definition  284  6 0 0
#
 task definition  285  26 0 0 #S284
#
 task definition  286  6 0 0
#
 task definition  287  26 0 0 #S286
#
 task definition  288  6 0 0 #S if attack 254
#
 task definition  289  6 0 0 #S if attack 255
#-----------------------------------
```

```
# SCUD missiles (N=28 maximum)
#---------------------------------
 task definition  290  14 0 0 #S262
#
 task definition  291  14 0 0 #S263
#
 task definition  292  14 0 0 #S264
#
 task definition  293  14 0 0 #S265
#
 task definition  294  14 0 0 #S266
#
 task definition  295  14 0 0 #S267
#
 task definition  296  14 0 0 #S268
#
 task definition  297  14 0 0 #S269
#
 task definition  298  14 0 0 #S270
#
 task definition  299  14 0 0 #S271
#
 task definition  300  14 0 0 #S272
#
 task definition  301  14 0 0 #S273
#
 task definition  302  14 0 0 #S274
#
 task definition  303  14 0 0 #S275
#
 task definition  304  14 0 0 #S276
#
 task definition  305  14 0 0 #S277
#
 task definition  306  14 0 0 #S278
#
 task definition  307  14 0 0 #S279
#
 task definition  308  14 0 0 #S280
```

```
#
 task definition  309  14 0 0 #S281
#
 task definition  310  14 0 0 #S282
#
 task definition  311  14 0 0 #S283
#
 task definition  312  14 0 0 #S284
#
 task definition  313  14 0 0 #S285
#
 task definition  314  14 0 0 #S286
#
 task definition  315  14 0 0 #S287
#
 task definition  316  14 0 0 #S288
#
 task definition  317  14 0 0 #S289
#----------------------------------
# CD (Exocet-like) missiles (N=22)
#----------------------------------
 task definition  318  13 0 0  #S232
#
 task definition  319  13 0 0  #S233
#
 task definition  320  13 0 0  #S234
#
 task definition  321  13 0 0  #S235
#
 task definition  322  13 0 0  #S236
#
 task definition  323  13 0 0  #S237
#
 task definition  324  13 0 0  #S238
#
 task definition  325  13 0 0  #S239
#
 task definition  326  13 0 0  #S240
#
```

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```
 task definition  327  13 0 0  #S241
#
 task definition  328  13 0 0  #S242
#
 task definition  329  13 0 0  #S243
#
 task definition  330  13 0 0  #S244
#
 task definition  331  13 0 0  #S245
#
 task definition  332  13 0 0  #S246
#
 task definition  333  13 0 0  #S247
#
 task definition  334  13 0 0  #S248
#
 task definition  335  13 0 0  #S249
#
 task definition  336  13 0 0  #S250
#
 task definition  337  13 0 0  #S251
#
 task definition  338  13 0 0  #S252
#
 task definition  339  13 0 0  #S253
#---------------------------------
# merchant ships (N=7)
#---------------------------------
 task definition  340  12 0 0
#
 task definition  341  12 0 0
#
 task definition  342  12 0 0
#
 task definition  343  12 0 0
#
 task definition  344  12 0 0
#
 task definition  345  12 0 0
```

```
#
 task definition  346  12 0 0
#---------------------------------
# possible hostile ships (N=8: 4 and 4)
#---------------------------------
 task definition  347  19 0 0
#
 task definition  348  19 0 0
#
 task definition  349  19 0 0
#
 task definition  350  19 0 0
#
 task definition  351  20 0 0
#
 task definition  352  20 0 0
#
 task definition  353  20 0 0
#
 task definition  354  20 0 0
#----------------------------------
# SAM sites (N=16)
#----------------------------------
 task definition  355  40 0 0  #super SAM
#
 task definition  356  10 0 0
#
 task definition  357  10 0 0
#
 task definition  358  10 0 0
#
 task definition  359  10 0 0
#
 task definition  360  10 0 0
#
 task definition  361  10 0 0
#
 task definition  362  10 0 0
#
```

```
 task definition  363  10 0 0
#
 task definition  364  10 0 0
#
 task definition  365  10 0 0
#
 task definition  366  10 0 0
#
 task definition  367  40 0 0  #super SAM
#
 task definition  368  10 0 0
#
 task definition  369  10 0 0
#
 task definition  370  10 0 0
#----------------------------------
# mine fields (N=12)
#----------------------------------
 task definition  371  15 0 0
#
 task definition  372  15 0 0
#
 task definition  373  15 0 0
#
 task definition  374  15 0 0
#
 task definition  375  15 0 0
#
 task definition  376  15 0 0
#
 task definition  377  15 0 0
#
 task definition  378  15 0 0
#
 task definition  379  15 0 0
#
 task definition  380  15 0 0
#
 task definition  381  15 0 0
```

```
#
 task definition  382  15 0 0
#---------------------------------
# DDG-firing exocet missiles (N=12) -- reqs 1 hit now
#---------------------------------
 task definition  383  3 0 0
# task repeat 383 1
#
 task definition  384  3 0 0
#
 task definition  385  3 0 0
# task repeat 385 1
#
 task definition  386  3 0 0
#
 task definition  387  3 0 0
# task repeat 387 1
#
 task definition  388  3 0 0
#
 task definition  389  3 0 0
# task repeat 390 1
#
 task definition  390  3 0 0
#
 task definition  391  3 0 0
# task repeat 391 1
#
 task definition  392  3 0 0
#
 task definition  393  3 0 0
#
 task definition  394  3 0 0
#---------------------------------
# search and rescue at sea (N=10)
#---------------------------------
 task definition  395  23 0 0
#
 task definition  396  23 0 0
```

```
#
 task definition  397  23 0 0
#
 task definition  398  23 0 0
#
 task definition  399  23 0 0
#
 task definition  400  23 0 0
#
 task definition  401  23 0 0
#
 task definition  402  23 0 0
#
 task definition  403  23 0 0
#
 task definition  404  23 0 0
#----------------------------------
# red a/c attackers (N=18) - reqs 1 hit
#----------------------------------
 task definition  405  7 0 0
#task repeat 405 1
#
 task definition  406  7 0 0
#task repeat 406 1
#
 task definition  407  7 0 0
#task repeat 407 1
#
 task definition  408  7 0 0
#task repeat 408 1
#
 task definition  409  7 0 0
#task repeat 409 1
#
 task definition  410  7 0 0
#task repeat 410 1
#
 task definition  411  7 0 0
#task repeat 411 1
```

```
#
 task definition  412  7 0 0
#task repeat 412 1
#
 task definition  413  7 0 0
#task repeat 413 1
#
 task definition  414  7 0 0
#task repeat 414 1
#
 task definition  415  7 0 0
#task repeat 415 1
#
 task definition  416  7 0 0
#task repeat 416 1
#
 task definition  417  7 0 0
#task repeat 417 1
#
 task definition  418  7 0 0
#task repeat 418 1
#
 task definition  419  7 0 0
#task repeat 419 1
#
 task definition  420  7 0 0
#task repeat 420 1
#
 task definition  421  7 0 0
#task repeat 421 1
#
 task definition  422  7 0 0
#task repeat 422 1
#-----------------------------------
# commercial air (N=8)
#-----------------------------------
 task definition  423  11 0 0
#
 task definition  424  11 0 0
```

```
#
 task definition  425  11 0 0
#
 task definition  426  11 0 0
#
 task definition  427  11 0 0
#
 task definition  428  11 0 0
#
 task definition  429  11 0 0
#
 task definition  430  11 0 0
#----------------------------------
# possible hostile aircarft (N=8: 3 and 5)
#----------------------------------
 task definition  431  17 0 0
#
 task definition  432  17 0 0
#
 task definition  433  17 0 0
#
 task definition  434  18 0 0
#
 task definition  435  18 0 0
#
 task definition  436  18 0 0
#
 task definition  437  18 0 0
#
 task definition  438  18 0 0
#----------------------------------
# reconnaisance air (N=4)
#----------------------------------
 task definition  439  24 0 0
#
 task definition  440  24 0 0
#
 task definition  441  24 0 0
#
```

```
 task definition  442  24 0 0
#----------------------------------
# air defenders (N=2)
#----------------------------------
 task definition  443  37 0 0
#
 task definition  444  37 0 0
#----------------------------------
# other S&R/mayday reports (N=4)
#----------------------------------
 task definition  445  33 0 0 #ground SAR
#
 task definition  446  27 0 0
#
 task definition  447  27 0 0
#
 task definition  448  27 0 0
#----------------------------------
# Gunrunning patrol boats (N=2)
#----------------------------------
 task definition  449  34 0 0
#
 task definition  450  34 0 0
#----------------------------------
# Exocet missiles (N=10)
#----------------------------------
 task definition  451  16 0 0
#
 task definition  452  16 0 0
#
 task definition  453  16 0 0
#
 task definition  454  16 0 0
#
 task definition  455  16 0 0
#
 task definition  456  16 0 0
#
 task definition  457  16 0 0
```

```
#
 task definition  458  16 0 0
#
 task definition  459  16 0 0
#
 task definition  460  16 0 0
#----------------------------------
# SCUD early warnings (N=11)
#----------------------------------
 task definition  461  22 0 0
#
 task definition  462  22 0 0
#
 task definition  463  22 0 0
#
 task definition  464  22 0 0
#
 task definition  465  22 0 0
#
 task definition  466  22 0 0
#
 task definition  467  22 0 0
#
 task definition  468  22 0 0
#
 task definition  469  22 0 0
#
 task definition  470  22 0 0
#
 task definition  471  22 0 0
#----------------------------------
# mobile SAM sites  (N=1)
#----------------------------------
 task definition  472  21 0 0
#----------------------------------
# Enemy Aircraft (N=2)
#----------------------------------
 task definition  473  7 0 0
#
```

```
 task definition  474  7 0 0
#---------------------------------
# task prerequisites id  num pr(1) pr(2) ... pr(num)
# id:     integer number from 200 to 399, giving an unique id to the
task.
# num:     integer number of prerequisite tasks that this task has
# pr(i):   the task number of a prerequisite for this class
#          Note: prerequisites must have lower task number [i.e. pr(i) <
id ]
#          default=task has no prerequisites (num=0)
#---------------------------------
 task prerequisites 203  1  200  #NBW <= CMD
 task prerequisites 209  4  203 201 207 208  #ABW <= NBW, Bridge, SA3,
SA3
#task prerequisites 210  1  209 #ABE <= ABW
 task prerequisites 211  2  210  206 #NBE <= ABE, mines
 task prerequisites 212  3  211  205 209 #port <= mines, NBE, ABW
#
#---------------------------------
#
# task spawn  id  num  type  sid(1)  ...   sid(5)
#                             sid(6)  ...   sid(10)
#                               ...    ...    ...
#                             sid(num-4) ...  sid(num)
# id:     integer id of 'spawner' task for which new tasks will be
spawned.
# num:     integer number of tasks to be spawned.
# type:    character A or D denoting a task Attack or task Disappear
event.
# sid(i): integer ids of 'spawned' tasks.
# NOTE:i)  0 < num < n, where n is specified via 'number_of' statement.
#     ii)  a task can be both spawned and a spawner (ie, recursive),
#           however, a task cannot be spawned by more than one spawner.
#    iii) to prevent spawning cycles, ie, X spawns Y spawns X, we
#            require id < sid(i), i = 1..num.
#     iv)  at most 5 spawned task ids specified per line, and, for
#           num > 5, only last line can have <= 5 task ids specified.
#
#--------------------
#    timing events
#--------------------
```

```
# Destroyers that  fire XOCs, next location
 task spawn   383 2 D 451 384

 task spawn   384 2 D 452 393

 task spawn   385 2 D 453 386

 task spawn   386 1 D 454

 task spawn   387 2 D 455 388

 task spawn   388 1 D 456

 task spawn   389 2 D 457 390

#task spawn   390 1 D 458

 task spawn   391 2 D 459 392

 task spawn   392 2 D 460 394

# Coastal defense missile launches
 task spawn   232 1 D 318

 task spawn   233 1 D 319

 task spawn   234 1 D 320

 task spawn   235 1 D 321

 task spawn   236 1 D 322

 task spawn   237 1 D 323

 task spawn   238 1 D 324

 task spawn   239 1 D 325

 task spawn   240 1 D 326

 task spawn   241 1 D 327

 task spawn   242 1 D 328

 task spawn   243 1 D 329

 task spawn   244 1 D 330

 task spawn   245 1 D 331

 task spawn   246 1 D 332

 task spawn   247 1 D 333

 task spawn   248 1 D 334

 task spawn   249 1 D 335

 task spawn   250 1 D 336

 task spawn   251 1 D 337

 task spawn   252 1 D 338

 task spawn   253 1 D 339

# SCUD missile launches (1st missile @+1; second setup @+60)
 task spawn   262 2 D 263 290

 task spawn   263 1 D     291

 task spawn   264 2 D 265 292

 task spawn   265 1 D     293
```

```
 task spawn  266 2 D 267 294
 task spawn  267 1 D     295
 task spawn  268 2 D 269 296
 task spawn  269 1 D     297
 task spawn  270 2 D 271 298
 task spawn  271 1 D     299
 task spawn  272 2 D 273 300
 task spawn  273 1 D     301
 task spawn  274 2 D 275 302
 task spawn  275 1 D     303
 task spawn  276 2 D 277 304
 task spawn  277 1 D     305
 task spawn  278 2 D 279 306
 task spawn  279 1 D     307
 task spawn  280 2 D 281 308
 task spawn  281 1 D     309
 task spawn  282 2 D 283 310
 task spawn  283 1 D     311
 task spawn  284 2 D 285 312  # mobile
 task spawn  285 1 D     313
 task spawn  286 2 D 287 314  # mobile
 task spawn  287 1 D     315
# --------------------------
 task spawn  210 1 A 445  #SAR at ABE
 task spawn  201 1 A 446  #SAR at Bridge 1
 task spawn  258 3 D 415 473 474 #attack wave for hidden airbase
# --------------------------
game end 212 60.0  # capturing PORT ends game
#<<<<<<<<< Maneuver Information: N6rn2 >>>>>>>>>
#
# maneuver definition id  time
#          flag(1)  x(1)  y(1)  v(1)
#          flag(2)  x(2)  y(2)  v(2)
#          ... ... ... ...
#          flag(m)  x(m)  y(m)  v(m)
# id:      integer number uniquely specifying this  task.
# time:    floating number specifying the task arrival time.
#          If this number is omitted, a randomly generated
#          arrival time will be assigned to the task.
```

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```
# flag(i): one character to indicate the type of the maneuver.
# =m        ordinary maneuver
# =s        maneuver of staying at a point
# =e        ending maneuver
# v(i):     relative velocity (0<vi<=1).
# if        flagi=s, then vi is the task's staying time
#           rather than its velocity.
# x(i),y(i): coordinates, in [-0.5,1.5]*simu_scale.
# default   straight line maneuvers automatically generated,
#           starting at (simulation scale)/2 and ending
#           in the center of the screen.
#
#-------------------------------
# Tasks 200-213 (mission task graph & prerequisites)
#-------------------------------
maneuver definition   200  1.00   #command center
s  125.0  330.0  3600.
e  125.0  330.0  0.0
#
maneuver definition   211  1.00   # Naval Base East
s  200.0  200.0  3600.
e  200.0  200.0  0.0
#
maneuver definition   203  1.00   # Naval Base West
s  100.0  200.0  3600.
e  100.0  200.0  0.0
#
maneuver definition   210  1.00   # Air Base East
s   150.0  300.0  3600.
e   150.0  300.0  0.0
#
maneuver definition   209  1.00   # AirBase West
s  50.0  300.0  3600.
e  50.0  300.0  0.0
#
maneuver definition   201  1.00   #bridge1
s  80.0  245.0  3600.
e  80.0  245.0  0.0
#
```

```
maneuver definition   202  1.00   #bridge2
s  140.0  240.0  3600.
e  140.0  240.0  0.0
#
maneuver definition   206  1.00   #mines @ NBE
s  200.0  190.0  3600.
e  200.0  190.0  0.0
#
maneuver definition   204  3000.00
s  100.0  360.0  3600.
e  100.0  360.0  0.0
#
maneuver definition   205  100.00 #mines @ Tunis
s  320.0  190.0  3600.
e  320.0  190.0  0.0
#
maneuver definition   207  10.000   #SAM @ ABW
s   40.0   290.0  3000.0
e   40.0   290.0  0.0
#
maneuver definition   208  10.000   #SAM @ABW
s   60.0   290.0  3000.0
e   60.0   290.0  0.0
#
maneuver definition   212  1.00   #Tunis
s  320.0  200.0  3600.
e  320.0  200.0  0.0
#
maneuver definition   213  3000.00
s  100.0  360.0  3600.
e  100.0  360.0  0.0
#
maneuver definition   214  3000.00
s  100.0  360.0  3600.
e  100.0  360.0  0.0
#
maneuver definition   215  3000.00
s  100.0  360.0  3600.
e  100.0  360.0  0.0
```

```
#

#--------------------------------
# Tasks 216 -31 (enemy patrol boats)
#############################Patrol Boats
#--------------------------------
maneuver definition   216  160.000  # attacks CG
s   230.0    190.0  9.0
m   230.0    190.0  0.8
e   280.0    150.0  0.0
#
maneuver definition   217  180.000 # attacks CVN
m    90.0    160.0  1.0
m    60.0    123.0  0.6
m   160.0    123.0  0.8
e   200.0    100.0  0.0
#
maneuver definition   218  180.000 # attacks DDGC
m  325.0    200.0  0.6
m  375.0    175.0  1.0
m  410.0    160.0  1.0
e  370.0    150.0  0.0
#
maneuver definition   219  160.000 # attacks DDGC
m  375.0     50.0  1.0
m  325.0    100.0  1.0
e  370.0    150.0  0.0
#
maneuver definition   220  2100.000 # attacks CG
m  100.0  200.0  0.7  #out of NBE
e  289.0  153.0  0.0
#
maneuver definition   221  160.000 # attacks CVN
m  200.0  200.0  1.0  #out of NBW
e  200.0  100.0  0.0
#
maneuver definition   222  160.000 # attacks DDGA
m  100.0  200.0  1.0  #out of NBE
e  120.0  150.0  0.0
#
```

```
maneuver definition   223   600.000 # attacks FFG
m   425.0   450.0   0.7   #out of Libya
m   440.0   420.0   1.0
e   440.0   380.0   0.0
#
maneuver definition   224   1200.000 # attacks DDGA
m   100.0   200.0   0.7   #out of NBE
m   160.0   150.0   1.0
e   120.0   150.0   0.0
#
maneuver definition   225   1260.000 # attacks CVN
m   320.0   200.0   1.0   #out of Tunis
m   220.0   180.0   1.0
e   200.0   100.0   0.0
#
maneuver definition   226   1800.000 # attacks CVN
m   200.0   200.0   0.8   #out of NBW
m   240.0   120.0   1.0
e   200.0   100.0   0.0
#
maneuver definition   227   600.000 # attacks CG
m   200.0   200.0   0.7   #out of NBW
m   240.0   125.0   1.0
e   280.0   150.0   0.0
#
maneuver definition   228   160.000 # attacks DDGA
m   100.0   200.0   0.7   #out of NBE
m   160.0   150.0   1.0
e   120.0   150.0   0.0
#
maneuver definition   229   200.000 # attacks CG
m   230.0   200.0   0.7   #out of hiding at shore
m   300.0   170.0   1.0
e   280.0   150.0   0.0
#
maneuver definition   230   180.000 # attacks DDGB
m   360.0   195.0   0.7   #out of hiding at shore
m   400.0   195.0   0.6
m   410.0   240.0   1.0
```

```
e  430.0  240.0  0.0
#
maneuver definition  231  160.00  # attacks FFG
m  425.0  450.0  1.0  #out of Libya
e  440.0  380.0  0.0
#
#-------------------------------
# Tasks 232-253 (CD/silkworm launchers)
#############################Coastal Defense Launchers
#-------------------------------
maneuver definition  232  480.00  # target DDGA
s  80.0   205.0  70.0
e  80.0   205.0   0.0
#
maneuver definition  233  1500.00  # target DDGA
s  90.0   205.0  70.0
e  90.0   205.0   0.0
#
maneuver definition  234  5000.00  # target DDGA
s  110.0   205.0  70.0
e  110.0   205.0   0.0
#
maneuver definition  235  5000.00  # target DDGA
s  120.0   205.0  70.0
e  120.0   205.0   0.0
#
maneuver definition  236  600.00  # target CVN
s  180.0   205.0  70.0
e  180.0   205.0   0.0
#
maneuver definition  237  1200.00  # target CVN
s  190.0   205.0  70.0
e  190.0   205.0   0.0
#
maneuver definition  238  5000.00  # target CVN
s  210.0   205.0  70.0
e  210.0   205.0   0.0
#
maneuver definition  239  5000.00  # target CVN
```

```
s  220.0   205.0   70.0
e  220.0   205.0    0.0
#
maneuver definition   240   1000.00   # target CG
s  290.0   205.0   70.0
e  290.0   205.0    0.0
#
maneuver definition   241   1800.00   # target CG
s  270.0   205.0   70.0
e  270.0   205.0    0.0
#
maneuver definition   242   5000.00   # target CG
s  280.0   205.0   70.0
e  280.0   205.0    0.0
#
maneuver definition   243   5000.00   # target CG
s  280.0   200.0   70.0
e  280.0   200.0    0.0
#
maneuver definition   244   150.00   # target DDGB
s  370.0   210.0   70.0
e  370.0   210.0    0.0
#
maneuver definition   245   1200.00   # target DDGB
s  370.0   230.0   70.0
e  370.0   230.0    0.0
#
maneuver definition   246   5000.00   # target DDGB
s  368.0   250.0   70.0
e  368.0   250.0    0.0
#
maneuver definition   247   5000.00   # target DDGB
s  370.0   270.0   70.0
e  370.0   270.0    0.0
#
maneuver definition   248   110.00   # target FFG
s  370.0   350.0   70.0
e  370.0   350.0    0.0
#
```

```
maneuver definition   249  1250.00  # target FFG
s  370.0   370.0  70.0
e  370.0   370.0   0.0
#
maneuver definition   250  5000.00  # target FFG
s  370.0   390.0  70.0
e  370.0   390.0   0.0
#
maneuver definition   251  5000.00  # target FFG
s  370.0   410.0  70.0
e  370.0   410.0   0.0
#
maneuver definition   252  300.00  # target DDGC
s  320.0   200.0  70.0
e  320.0   200.0   0.0
#
maneuver definition   253  1700.00  # target DDGC
s  325.0   200.0  70.0
e  325.0   200.0   0.0
#
#-------------------------------
# Tasks 254-257 (Ground force units)
#-------------------------------
maneuver definition   254  10.00  # RGF @ bridge1
s  83.0  241.0  3000.0
e  83.0  241.0  0.0
#
maneuver definition   255  10.00  # RGF @ ABE
s  148.0  305.0  3000.0
e  148.0  305.0  0.0
#
maneuver definition   256  10.00  # RGF @ NBE
s  200.0  205.0  3000.0
e  200.0  205.0  0.0
#
maneuver definition   257  10.00  # RGF 4
s  320.0  320.0  3000.0
e  320.0  320.0  0.0
#
```

```
#-------------------------------
# Tasks 258-259 (Complex Air)              ##################Complex
Air Tasks#################

#-------------------------------
maneuver definition   258  1230.00

s  255.0  300.0  600.0

e  255.0  300.0  0.0

#

maneuver definition   259  5000.00

s  250.0  300.0  10.0

e  250.0  300.0  0.0

#

#-------------------------------
# Tasks 260-261 (Complex Sea Tasks)        ####################Complex
Sea Tasks###############

#-------------------------------
maneuver definition   260  1500.00

s  460.0  280.0  550.0

e  460.0  280.0  0.0

#

maneuver definition   261  840.00

s  175.0  125.0  500.0

e  175.0  125.0  0.0

#

#-------------------------------
# Tasks 262-89 (SCUD missile launchers)       ###############Scud
Launchers

#-------------------------------
maneuver definition   262  1720.000 # colocated with super SAM

s   280.0   262.0  113.0

e   280.0   262.0  0.0

#

maneuver definition   263   2.000 # second launch

s   280.0   262.0  175.0

e   280.0   262.0  0.0

#

maneuver definition   264  1520.000 # colocated with Super SAM

s  100.0   262.0  110.0

e  100.0   262.0  0.0

#
```

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```
maneuver definition   265   2.000 # second launch
s  100.0    262.0   164.0
e  100.0    262.0    0.0
#
maneuver definition   266  1720.000
s  200.0    260.0   101.0
e  200.0    260.0    0.0
#
maneuver definition   267   2.000 # second launch
s  200.0    260.0   178.0
e  200.0    260.0    0.0
#
maneuver definition   268  1720.000
s  100.0    300.0   116.0
e  100.0    300.0    0.0
#
maneuver definition   269   2.000 # second launch
s  100.0    300.0   170.0
e  100.0    300.0    0.0
#
maneuver definition   270  5000.000
s  200.0    300.0   97.0
e  200.0    300.0    0.0
#
maneuver definition   271  2.000 # second launch
s  200.0    300.0   160.0
e  200.0    300.0    0.0
#
maneuver definition   272  5000.000
s  80.0    360.0   120.0
e  80.0    360.0    0.0
#
maneuver definition   273  2.000 # second launch
s  80.0    360.0   180.0
e  80.0    360.0    0.0
#
maneuver definition   274  5000.000
s  200.0    360.0   116.0
e  200.0    360.0    0.0
```

```
#
maneuver definition   275  2.000 # second launch
s  200.0    360.0  188.0
e  200.0    360.0   0.0
#
maneuver definition   276  5000.000
s  140.0   410.0   127.0
e  140.0   410.0    0.0
#
maneuver definition   277  2.000 # second launch
s  140.0   410.0   180.0
e  140.0   410.0    0.0
#
maneuver definition   278  5000.000
s  200.0   400.0   96.0
e  200.0   400.0   0.0
#
maneuver definition   279  2.000  # second launch
s  200.0   400.0   160.0
e  200.0   400.0    0.0
#
maneuver definition   280  200.000
s  290.0   320.0   112.0
e  290.0   320.0    0.0
#
maneuver definition   281  2.000 # second launch
s  290.0   320.0   160.0
e  290.0   320.0    0.0
#
maneuver definition   282  880.000
s  290.0  380.0   93.0
e  290.0  380.0    0.0
#
maneuver definition   283  2.000 # second launch
s  290.0  380.0   158.0
e  290.0  380.0    0.0
#
maneuver definition   284  5000.000 # mobile launcher
s  290.0  440.0   110.0
```

```
e  290.0  440.0  0.0

#

maneuver definition   285  2.000  # next position of 284 (333s later)

s  290.0  440.0  1.0

m  290.0  440.0  .95

e  340.0  300.0   0.0

#

maneuver definition   286  5000.000 # mobile launcher

s  200.0  240.0  112.0

e  200.0  240.0   0.0

#

maneuver definition   287  2.000  # next position of 286 (333s later)

m  200.0  240.0  0.99

s  200.0  260.0  98.0

e  200.0  260.0   0.0

#

maneuver definition   288  5000.000

s  245.0   300.0  110.0

e  245.0   300.0   0.0

#

maneuver definition   289  5000.000

s  240.0   300.0  110.0

e  240.0   300.0   0.0

#

#-------------------------------

# Tasks 290-317 (SCUD missiles spawned by launchers)
##############Scud Missiles

#-------------------------------

maneuver definition   290  1.000 # spawned by 262

s  280.0   262.0  3.0

m  280.0   262.0  1.0

e  440.0   180.0  0.0

#

maneuver definition   291  1.000 # spawned by 263

s  280.0   262.0  3.0

m  280.0   262.0  1.0

e  440.0   180.0  0.0

#

maneuver definition   292  1.000 # spawned by 264
```

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```
s   100.0    262.0 3.0
m   100.0    262.0 1.0
e   275.0     40.0  0.0
#
maneuver definition   293  1.000 # spawned by 265
s   100.0    262.0 3.0
m   100.0    262.0 1.0
e   275.0     40.0  0.0
#
maneuver definition   294  1.000 # spawned by 266
s   200.0    260.0  3.0
m   200.0    260.0  1.0
e   430.0    160.0  0.0
#
maneuver definition   295  1.000 # spawned by 267
s   200.0    260.0  3.0
m   200.0    260.0  1.0
e   430.0    160.0  0.0
#
maneuver definition   296  1.000 # spawned by 268
s   100.0    300.0  3.0
m   100.0    300.0  1.0
e   280.0     20.0  0.0
#
maneuver definition   297  1.000 # spawned by 269
s   100.0    300.0  3.0
m   100.0    300.0  1.0
e   280.0     20.0  0.0
#
maneuver definition   298  1.000 # spawned by 270
s   200.0    300.0  3.0
m   200.0    300.0  1.0
e   260.0    100.0  0.0
#
maneuver definition   299  1.000 # spawned by 271
s   200.0    300.0  3.0
m   200.0    300.0  1.0
e   420.0    180.0  0.0
#
```

```
maneuver definition    300  1.000 # spawned by 272
s   80.0    360.0  3.0
m   80.0    360.0  1.0
e  300.0     80.0  0.0
#
maneuver definition    301  1.000 # spawned by 273
s   80.0    360.0  3.0
m   80.0    360.0  1.0
e  300.0     80.0  0.0
#
maneuver definition    302  1.000 # spawned by 274
s  200.0    360.0  3.0
m  200.0    360.0  1.0
e  420.0    180.0  0.0
#
maneuver definition    303  1.000 # spawned by 275
s  200.0    360.0  3.0
m  200.0    360.0  1.0
e  420.0    180.0  0.0
#
maneuver definition    304  1.000 # spawned by 276
s  140.0    410.0  3.0
m  140.0    410.0  1.0
e  300.0     80.0  0.0
#
maneuver definition    305  1.000 # spawned by 277
s  140.0    410.0  3.0
m  140.0    410.0  1.0
e  300.0     80.0  0.0
#
maneuver definition    306  1.000 # spawned by 278
s  200.0    400.0  3.0
m  200.0    400.0  1.0
e  420.0    180.0  0.0
#
maneuver definition    307  1.000 # spawned by 279
s  200.0    400.0  3.0
m  200.0    400.0  1.0
e  420.0    180.0  0.0
```

```
#
maneuver definition   308  1.000 # spawned by 280
s  290.0   320.0  3.0
m  290.0   320.0  1.0
e  430.0   160.0  0.0
#
maneuver definition   309  1.000 # spawned by 281
s  290.0   320.0  3.0
m  290.0   320.0  1.0
e  430.0   160.0  0.0
#
maneuver definition   310  1.000 # spawned by 282
s  290.0   380.0  3.0
m  290.0   380.0  1.0
e  430.0   160.0  0.0
#
maneuver definition   311  1.000 # spawned by 283
s  290.0   380.0  3.0
m  290.0   380.0  1.0
e  430.0   160.0  0.0
#
maneuver definition   312  1.000 # spawned by 284 (mobile)
s  360.0   300.0  3.0
m  360.0   300.0  1.0
e  460.0   200.0  0.0
#
maneuver definition   313  1.000 # spawned by 285 (mobile)
s  340.0   300.0  3.0
m  340.0   300.0  1.0
e  460.0   200.0  0.0
#
maneuver definition   314  1.000 # spawned by 286 (mobile)
s  200.0   240.0   3.0
m  200.0   240.0   1.0
e  300.0    80.0   0.0
#
maneuver definition   315  1.000 # spawned by 287 (mobile)
s  200.0   260.0   3.0
m  200.0   260.0   1.0
```

```
e  300.0    80.0    0.0
#
maneuver definition   316  5000.000 # spawned by 288
s  245.0    300.0   3.0
m  245.0    300.0   1.0
e  320.0    200.0   0.0
#
maneuver definition   317  5000.000 # spawned by 289
s  240.0    300.0   3.0
m  240.0    300.0   1.0
e  320.0    200.0   0.0
#
#-------------------------------
# Tasks 318-339 (CD missiles spawned by launchers)
##########CD Missiles
#-------------------------------
maneuver definition   318  1.000 # Spawned by 232 target DDGA
m  80.0    205.0   1.0
e  120.0  150.0   0.0
#
maneuver definition   319  1.000 # Spawned by 233 target DDGA
m  90.0    205.0   1.0
e  120.0  150.0   0.0
#
maneuver definition   320  1.000 # Spawned by 234 target DDGA
m  110.0   205.0   1.0
e  120.0  150.0   0.0
#
maneuver definition   321  1.000 # Spawned by 235 target DDGA
m  120.0   205.0   1.0
e  120.0  150.0   0.0
#
maneuver definition   322  1.000 # Spawned by 236 target CVN
m  180.0   205.0   1.0
e  200.0  100.0   0.0
#
maneuver definition   323  1.000 # Spawned by 237 target CVN
m  190.0   205.0   1.0
e  200.0  100.0   0.0
```

```
#
maneuver definition    324  1.000 # Spawned by 238 target CVN
m   210.0   205.0   1.0
e   200.0   100.0   0.0
#
maneuver definition    325  1.000 # Spawned by 239 target CVN
m   220.0   205.0   1.0
e   200.0   100.0   0.0
#
maneuver definition    326  1.000 # Spawned by 240 target CG
m   290.0   205.0   1.0
e   280.0   150.0   0.0
#
maneuver definition    327  1.000 # Spawned by 241 target CG
m   270.0   205.0   1.0
e   280.0   150.0   0.0
#
maneuver definition    328  1.000 # Spawned by 242 target CG
m   280.0   205.0   1.0
e   280.0   150.0   0.0
#
maneuver definition    329  1.000 # Spawned by 243 target CG
m   280.0   200.0   1.0
e   280.0   150.0   0.0
#
maneuver definition    330  1.000 # Spawned by 244 target DDGB
m   370.0   210.0   1.0
e   430.0   240.0   0.0
#
maneuver definition    331  1.000 # Spawned by 245 target DDGB
m   370.0   230.0   1.0
e   430.0   240.0   0.0
#
maneuver definition    332  1.000 # Spawned by 246 target DDGB
m   368.0   250.0   1.0
e   430.0   240.0   0.0
#
maneuver definition    333  1.000 # Spawned by 247 target DDGB
m   370.0   270.0   1.0
```

```
e   430.0   240.0   0.0
#
maneuver definition   334  1.000 # Spawned by 248 target FFG
m   370.0   350.0   1.0
e   440.0   380.0   0.0
#
maneuver definition   335  1.000 # Spawned by 249 target FFG
m   370.0   370.0   1.0
e   440.0   380.0   0.0
#
maneuver definition   336  1.000 # Spawned by 250 target FFG
m   370.0   390.0   1.0
e   440.0   380.0   0.0
#
maneuver definition   337  1.000 # Spawned by 251 target FFG
m   370.0   410.0   1.0
e   440.0   380.0   0.0
#
maneuver definition   338  1.000 # Spawned by 252 target DDGC
m   320.0   200.0   1.0
e   370.0   150.0   0.0
#
maneuver definition   339  1.000 # Spawned by 253 target DDGC
m   325.0   200.0   1.0
e   370.0   150.0   0.0
#
#-------------------------------
# Tasks 340-346  (merchant shipping)              ###########Merchant
Ships
#-------------------------------
maneuver definition   340  100.00
s   240.0    100.0  5.0
m   240.0    100.0  0.99
e   240.0    200.0  0.0
#
maneuver definition   341  600.00
s   340.0    100.0  5.0
m   340.0    100.0  0.99
e   340.0    200.0  0.0
```

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```
#

maneuver definition   342  1200.00

m   340.0   127.0  0.99

m   375.0   127.0  0.99

e   500.0    50.0  0.0

#

maneuver definition   343  1500.00

m     5.0   127.0  0.99

e   375.0   127.0  0.0

#

maneuver definition   344  1600.00

m   500.0   424.0  0.99

s   424.0   450.0  1.0

m   424.0   450.0  0.99

m   424.0   300.0  0.99

e   375.0   124.0  0.0

#

maneuver definition   345  1700.00

m   500.0    50.0  0.99

m   373.0   122.0  0.99

m   423.0   300.0  0.99

e   425.0   450.0  0.0

#

maneuver definition   346  1500.00

s   426.0   450.0  1.0

m   426.0   450.0  0.99

m   426.0   300.0  0.99

e   375.0   125.0  0.0

#

#-------------------------------

# Tasks 347-354 (possible hostile ships)
##########Possible Hostile Ships

#-------------------------------

maneuver definition   347  160.00  # hostile to FFG

m   424.0   430.0  0.5

m   424.0   400.0  0.99

e   420.0   380.0  0.0

#

maneuver definition   348  160.00 # hostile to CG
```

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```
m   200.0    200.0   0.5
m   270.0    126.0   0.5
m   300.0    126.0   0.99
e   280.0    150.0   0.0
#
maneuver definition    349   200.00 # hostile to DDGA
m   100.0    200.0   0.5
m    90.0    150.0   0.99
e   120.0    150.0   0.0
#
maneuver definition    350   180.00  # hostile to CVN
m   320.0    200.0   0.5
m   220.0    145.0   0.99
e   200.0    100.0   0.0
#
maneuver definition    351   120.00  # not hostile to FFG
m   425.0    440.0   0.99
m   440.0    400.0   0.99
m   475.0    400.0   0.5
e   425.0    440.0   0.0
#
maneuver definition    352   1800.00  # not hostile DDGB
m   428.0    420.0   0.99
m   423.0    300.0   0.99
m   375.0    125.0   0.99
e   500.0     55.0    0.0
#
maneuver definition    353   1500.00  # not hostile DDGB
m   485.0    430.0    0.99
m   440.0    235.0    0.99
e   485.0    430.0    0.0
#
maneuver definition    354   160.00  # not hostile DDGA
m    75.0     75.0    0.99
m   125.0    100.0    0.99
m   175.0    100.0    1.0
e   275.0    130.0    0.0
#
#-------------------------------
```

```
# Tasks 355-70 (SAM sites)                          ###########SAM
Sites
#-------------------------------
maneuver definition   355  1520.000  #super SAM
s  280.0    260.0  3000.0
e  280.0    260.0  0.0
#
maneuver definition   356  18.000
s  100.0    250.0  3000.0
e  100.0    250.0  0.0
#
maneuver definition   357  18.000
s  200.0    250.0  3000.0
e  200.0    250.0  0.0
#
maneuver definition   358  5000.000
s  210.0    260.0  3000.0
e  210.0    260.0  0.0
#
maneuver definition   359  18.000
s  200.0    290.0  3000.0
e  200.0    290.0  0.0
#
maneuver definition   360  5000.000
s  210.0    300.0  3000.0
e  210.0    300.0  0.0
#
maneuver definition   361  12.000
s   80.0    350.0  3000.0
e   80.0    350.0  0.0
#
maneuver definition   362  12.000
s  200.0    350.0  3000.0
e  200.0    350.0  0.0
#
maneuver definition   363  5000.000
s  210.0    360.0  3000.0
e  210.0    360.0  0.0
#
```

```
maneuver definition   364  12.000

s  140.0   400.0  3000.0

e  140.0   400.0  0.0

#

maneuver definition   365  12.000

s  200.0   390.0  3000.0

e  200.0   390.0  0.0

#

maneuver definition   366  5000.000

s  210.0   400.0  3000.0

e  210.0   400.0  0.0

#

maneuver definition   367  1320.000   #super SAM

s  100.0   300.0  3000.0

e  100.0   300.0    0.0

#

maneuver definition   368  18.000

s  300.0   320.0  3000.0

e  300.0   320.0    0.0

#

maneuver definition   369  18.000

s  300.0   380.0  3000.0

e  300.0   380.0    0.0

#

maneuver definition   370  18.000

s  300.0   440.0  3000.0

e  300.0   440.0    0.0

#

#-------------------------------

# Tasks 371-382 (Sea Mines)
##############Sea Mines

#-------------------------------

maneuver definition   371  5000.00

s  80.0  180.0  3000.0

e  80.0  180.0  0.0

#

maneuver definition   372  5000.00

s  120.0  180.0  3000.0

e  120.0  180.0  0.0
```

```
#
maneuver definition   373  5000.00   #at NBE
s  180.0   180.0   3000.0
e  180.0   180.0   0.0
#
maneuver definition   374  5000.00   #at NBE
s  220.0   180.0   3000.0
e  220.0   180.0   0.0
#
maneuver definition   375  5000.00
s  320.0   180.0   3000.0
e  320.0   180.0   0.0
#
maneuver definition   376  5000.00
s  150.0   120.0   3000.0
e  150.0   120.0   0.0
#
maneuver definition   377  2.00 #drifts towards CVN
m  240.0   120.0   1.0
e  200.0   100.0   0.0
#
maneuver definition   378  200.00 #drifts towards FFG
m  425.0   450.0   1.0
e  440.0   380.0   0.0
#
maneuver definition   379  5000.00
s  390.0   180.0   3000.0
e  390.0   180.0   0.0
#
maneuver definition   380  1.00 #drifts towards DDGB
m  390.0   240.0   1.0
e  430.0   240.0   0.0
#
maneuver definition   381  5000.00
s  390.0   300.0   3000.0
e  390.0   300.0   0.0
#
maneuver definition   382  5000.00
s  390.0   400.0   3000.0
```

```
e  390.0  400.0  0.0

#

#-------------------------------

# Tasks 383-394 (Destroyer paths)
##########Destroyer Maneuvers

#-------------------------------

maneuver definition   383  200.00 #attack DDGA

m   60.0  180.0  0.99

e  137.0  167.0  0.0  #fire XOC451, spawn 384

#

maneuver definition   384  240.00 #attack CVN

m  137.0  167.0  0.99

e  180.0  115.0  0.0  #fire XOC452, spawn 393

#

maneuver definition   385  5000.00 #attack DDGB

m  380.0  130.0  0.7

e  410.0  226.0  0.0  #fire XOC453, spawn 386

#

maneuver definition   386  260.00 #attack DDGB

m  410.0  226.0  0.99

m  395.0  240.0  0.99

e  410.0  254.0  0.0  #fire XOC454

#

maneuver definition   387  5000.00 #attack CG

m  200.0  200.0  0.71

m  240.0  126.0  0.70

e  280.0  126.0  0.0  #fire XOC455, spawn 388

#

maneuver definition   388  200.00  #attack CVN

m  280.0  126.0  0.99

e  200.0  124.0  0.0  #fire XOC456

#

maneuver definition   389  1750.00 #attack FFG

m  425.0  450.0  0.75

e  425.0  400.0  0.0  #fire XOC457, spawn 390

#

maneuver definition   390  1.00   #runs away

m  425.0  400.0  0.99

e  425.0  450.0  0.0
```

```
#

maneuver definition   391  280.00  #attack CVN

m   200.0   200.0   0.71

m   240.0   124.0   0.70

e   200.0   124.0   0.0   #fire XOC459, spawn 392

#

maneuver definition   392  300.00  #attack CG

m   200.0   124.0   0.99

e   280.0   126.0   0.0   #fire XOC460, spawn 394

#

maneuver definition   393  210.00

m   180.0   115.0   0.95

e   200.0   200.0   0.0

#

maneuver definition   394  300.00

m   280.0   126.0   0.95

e   320.0   200.0   0.0

#

#-------------------------------

# Tasks 395-404 (Sea REScues -- Tavail ~ 550 sec)
###########SAR

#-------------------------------

maneuver definition   395  920.000  #MOB for DDGB

s   460.0    240.0   260.0

e   460.0    240.0   0.0

#

maneuver definition   396  200.00   #SAR IN CVN AREA

s   200.0    120.0   560.0

e   200.0    120.0    0.0

#

maneuver definition   397  2000.00  #SOF pickup

s   380.0    340.0   540.0

e   380.0    340.0    0.0

#

maneuver definition   398  1550.000 #SOF pickup

s   220.0   195.0   580.0

e   220.0   195.0    0.0

#

maneuver definition   399  1220.000 #SOF pickup
```

```
s  110.0  195.0  550.0

e  110.0  195.0    0.0

#

maneuver definition   400  1700.00 #MOB at CG

s  260.0  150.0  530.0

e  260.0  150.0    0.0

#

maneuver definition   401  1600.00 #SOF pickup

s  380.0  195.0  590.0

e  380.0  195.0  0.0

#

maneuver definition   402  2000.00 #sea lane

s  400.0  180.0  510.0

e  400.0  180.0    0.0

#

maneuver definition   403  1700.000 #sea lane

s  420.0  400.0  500.0

e  420.0  400.0    0.0

#

maneuver definition   404  1900.00 #plane guard

s  190.0   105.0  570.0

e  190.0   105.0    0.0

#

#--------------------------------

# Tasks 405-422 (enemy aircraft attackers)
##########Enemy AC

#--------------------------------

maneuver definition   405  1250.00 # attacks FFG

m  255.0  300.0  0.8

e  450.0  380.0  0.0

#

maneuver definition   406  890.00 # attacks DDGC

m  150.0  300.0  0.9

m  320.0  320.0  0.8

e  370.0  150.0  0.0

#

maneuver definition   407  200.00 # attacks DDGA

m  50.0   300.0  0.6

m   5.0   200.0  0.7
```

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```
m  100.0  180.0  0.7
e  120.0  150.0  0.0
#
maneuver definition   408  920.00  # attacks FFG
m  150.0  300.0  0.8
m  300.0  280.0  0.8
e  440.0  380.0  0.0
#
maneuver definition   409  200.00 # attacks CG
m  150.0  300.0  0.9
e  280.0  150.0  0.0
#
maneuver definition   410  200.00  # attacks CVN
m   50.0   300.0  0.6
m  170.0   200.0  0.7
e  200.0   100.0  0.0
#
maneuver definition   411  1320.00  # diversion
m  50.0   300.0  0.5
s   5.0   100.0  5.0
m   5.0   100.0  0.5
m  100.0    5.0  0.5
s  200.0   60.0  10.0
e  200.0   60.0  0.0
#
maneuver definition   412  721.00  # attacks DDGA
m  150.0  300.0  0.6
m  180.0  200.0  0.7
m  100.0  180.0  0.7
e  120.0  150.0  0.0
#
maneuver definition   413  721.00  # attacks CG
m  370.0  460.0  0.95
m  260.0  380.0  0.99
e  280.0  150.0  0.0
#
maneuver definition   414  1251.00  # attacks DDGB
m  255.0  300.0  0.7
e  430.0  240.0  0.0
```

```
#
maneuver definition   415   1.00   # attacks CVN
m   255.0   300.0   0.8
e   200.0   100.0   0.0
#
maneuver definition   416   1253.00   # attacks CG
m   255.0   300.0   0.8
e   280.0   150.0   0.0
#
maneuver definition   417   900.00   # attacks DDGB
m   150.0   300.0   0.8
m   300.0   320.0   0.9
m   425.0   300.0   0.9
e   430.0   240.0   0.0
#
maneuver definition   418   1252.00   # attacks DDGC
m   255.0   300.0   0.9
e   370.0   150.0   0.0
#
maneuver definition   419   910.00  # attacks FFG
m   150.0   300.0   0.9
e   440.0   380.0   0.0
#
maneuver definition   420   721.00   # attacks CVN
m   150.0    300.0   0.6
m   200.0    200.0   0.7
e   200.0    100.0   0.0
#
maneuver definition   421   1020.00   # attacks CVN
m   150.0    300.0   0.6
m   170.0    200.0   0.7
e   200.0    100.0   0.0
#
maneuver definition   422   1000.00  # attacks DDGA
m   150.0   300.0   0.6
m   180.0   200.0   0.7
m   100.0   180.0   0.7
e   120.0   150.0   0.0
#
```

```
#-------------------------------
# Tasks 423-430 (commercial air)
###########Comm Air
#-------------------------------
maneuver definition   423  10.00
m     5.0   205.0   0.9
s   150.0    50.0  10.0
m   150.0    50.0   0.9
e   160.0     0.0   0.0
#
maneuver definition   424  100.00
m   320.0   200.0   0.9
m   150.0    50.0   0.9
e   100.0     0.0   0.0
#
maneuver definition   425  500.00
m   315.0    95.0   0.7
e   320.0   200.0   0.0
#
maneuver definition   426  900.00
m   415.0   455.0   0.8
e   430.0   200.0   0.0
#
maneuver definition   427  1500.00
m   500.0   380.0   0.9
e   315.0    95.0   0.0
#
maneuver definition   428  1500.00
m   315.0    95.0   0.8
e   100.0   200.0   0.0
#
maneuver definition   429  1200.00
m   370.0   460.0    0.9
e   500.0   275.0    0.0
#
maneuver definition   430  1800.00
m   100.0   200.0    0.99
m   150.0    50.0    0.99
e   160.0     0.0    0.0
```

```
#
#------------------------------
# Tasks 431-438 (possible hostile aircraft)          ##########Poss
Hostile AC
#------------------------------
maneuver definition   431  460.00  # hostile
m  500.0  500.0  0.7
m  380.0  120.0  0.8
e  280.0  150.0  0.0
#
maneuver definition   432  480.00  # hostile
m  500.0  500.0  0.7
s  315.0   95.0  15.0
m  315.0   95.0  0.7
e  120.0  150.0  0.0
#
maneuver definition   433  721.00  # hostile
m  300.0  400.0  0.8
m  420.0  220.0  0.7
e  430.0  240.0  0.0
#
maneuver definition   434  721.00
m  300.0  440.0  0.8
m  460.0  320.0  0.8
e  500.0  300.0  0.0
#
maneuver definition   435  230.00
m  370.0  460.0  0.7
m  380.0  120.0  0.7
e  290.0  150.0  0.0
#
maneuver definition   436  480.00
m  300.0  400.0  0.7
s  420.0  220.0  15.0
m  420.0  220.0  0.7
m  315.0   95.0  0.7
e  300.0  400.0  0.0
#
maneuver definition   437  480.00
```

```
m  500.0   500.0   0.7
s  315.0    95.0  15.0
m  315.0    95.0   0.7
m    5.0   100.0   0.9
e  500.0   500.0   0.0
#
maneuver definition   438  721.00
m  300.0   400.0   0.8
m  430.0   380.0   0.7
e  430.0   200.0   0.0
#
#-------------------------------
# Tasks 439-442 (recon aircraft)          ##########Recon AC
#-------------------------------
maneuver definition   439  1.00
m   50.0   300.0   0.5
m  200.0   170.0   0.5
s  320.0   180.0  10.0
m  320.0   180.0   0.7
e   50.0   300.0   0.0
#
maneuver definition   440  1200.00
m   50.0   300.0   0.5
m   60.0   180.0   0.5
s  200.0   180.0  10.0
m  200.0   180.0   0.7
e   50.0   300.0   0.0
#
maneuver definition   441  1.00
m  150.0   300.0   0.5
m  380.0   200.0   0.5
s  380.0   400.0  10.0
m  380.0   400.0   0.7
e  150.0   300.0   0.0
#
maneuver definition   442  1200.00
m  150.0   300.0   0.5
m  420.0   100.0   0.5
s  460.0   160.0  10.0
```

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```
m  460.0  160.0   0.7
e  150.0  300.0   0.0
#
#-------------------------------
# Tasks 443-444 (air_defenders/CAP)              ###########Enemy CAP
#-------------------------------
maneuver definition   443  40.00 #at ABW
s  50.0   290.0  2400.
e  50.0   290.0   0.0
#
maneuver definition   444  5000.00 #not used
m  28.5   66.0   0.99
e  62.0   75.0   0.0
#
#-------------------------------
# Tasks 445-448 (other SAR incl false reports)
#-------------------------------
maneuver definition   445  3.000 #SAR at ABE
s  155.0   295.0  590.0
e  155.0   295.0   0.0
#
maneuver definition   446  3.000 #SAR at Bridge
s   80.0   245.0  590.0
e   80.0   245.0   0.0
#
maneuver definition   447  5000.000
s  430.0   320.0  295.0
e  430.0   320.0   0.0
#
maneuver definition   448  5000.000
s  380.0   260.0  290.0
e  380.0   260.0   0.0
#
#-------------------------------
# Tasks 449-450 (patrol boats) - gunrunners
#-------------------------------
maneuver definition   449  960.00  #gunrunner
m  320.0  100.0  1.0
e  320.0  200.0   0.0
```

```
#

maneuver definition    450   960.00   #gunrunner

m   260.0   100.0   1.0

m   260.0   190.0   1.0

e   320.0   200.0   0.0

#

#-------------------------------

# Tasks 451-460 (Exocet missiles)
#########################Destroyer Missiles

#-------------------------------

maneuver definition    451   1.00   #target DDGA by 383

m   137.0   167.0   0.99

e   120.0   150.0   0.0

#

maneuver definition    452   1.00   #target CVN by 384

m   180.0   115.0   0.99

e   200.0   100.0   0.0

#

maneuver definition    453   1.00   #target DDGB by 385

m   410.0   226.0   0.99

e   430.0   240.0   0.0

#

maneuver definition    454   1.00   #target DDGB by 386

m   410.0   254.0   0.99

e   430.0   240.0   0.0

#

maneuver definition    455   1.00   #target CG by 387

m   280.0   126.0   0.99

e   280.0   150.0    0.0

#

maneuver definition    456   1.00   #target CVN by 388

m   200.0   124.0   0.99

e   200.0   100.0   0.0

#

maneuver definition    457   1.00   #target FFG by 389

m   425.0   400.0   0.99

e   440.0   380.0   0.0

#

maneuver definition    458   5000.00   #not used
```

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```
m  200.0  110.0  0.99

e  200.0  100.0  0.0

#

maneuver definition   459  1.00  #target CVN by 391

m  200.0  124.0  0.99

e  200.0  100.0  0.0

#

maneuver definition   460  1.00  #target CG by 392

m  280.0  126.0  0.99

e  280.0  150.0  0.0

#-------------------------------------------

# tasks 461-471 intel on fixed SCUD launchers        ###############EW
INTEL on SCUDs

#-------------------------------------------

maneuver definition   461  1520.00 #ew262 at 280,262

s   290.0   260.0  200.0

e   290.0   260.0  0.0

#

maneuver definition   462  1320.00 #ew264 at 100,262

# colocated with super SAM

s  110.0   260.0  200.0

e  110.0   260.0  0.0

#

maneuver definition   463  1620.00 #ew266 at 200,260

s  210.0   250.0  100.0

e  210.0   250.0  0.0

#

maneuver definition   464  1520.00 #ew268 at 100,300

s   110.0   310.0  200.0

e   110.0   310.0   0.0

#

maneuver definition   465  5000.00 #ew270 at 200,300

s  210.0   310.0  100.0

e  210.0   310.0   0.0

#

maneuver definition   466  5000.00 #ew272 at 80,360

s  75.0   365.0  100.0

e  75.0   365.0   0.0

#
```

137

```
maneuver definition   467  5000.00 #ew274 at 200,360

s  205.0    370.0  100.0

e  205.0    370.0   0.0

#

maneuver definition   468  5000.00 #ew276 at 140,410

s  120.0    390.0  100.0

e  120.0    390.0   0.0

#

maneuver definition   469  5000.00 #ew278 at 200,400

s  220.0    390.0  100.0

e  220.0    390.0   0.0

#

maneuver definition   470  100.00 #ew280 at 290,320

s  295.0    310.0  100.0

e  295.0    310.0   0.0

#

maneuver definition   471  780.00 #ew282 at 290,380

s  280.0  375.0   100.0

e  280.0  375.0    0.0

#-------------------------------------------

# tasks 472 mobile SAM sites (N=3)                 ##########Mobile SAM
Sites

#-------------------------------------------

maneuver definition   472  1.000

s   320.0    230.0  3000.0

e   320.0    230.0   0.0

#

#-------------------------------------------

# tasks 473-474 Enemy Aircraft (N=2)
###############Additional Enemy Aircraft

#-------------------------------------------

maneuver definition   473  1.000 attacks DDGA

m   255.0  300.0  0.9

e   120.0  150.0  0.0

#

maneuver definition   474  1.000 attacks CG

m   255.0   300.0  0.8

e   280.0   150.0  0.0

#
#-------------- THE END -------------------
```

B. DIVISIONAL XS FILE

```
#<<<<< P8-data root file: June 10 2002 >>>>>>>
decision structure  7
      FLAG    GREEN    BLUE    PURPL    RED    ORNGE    BROWN    INTEL
       0       0       0       0       0       0        0        7
#---------
message file msgsDiv_P8.txt
#
simulation time 2305.0 #time 38mins 25sec
#---------
number_of tasks 275
#---------
simulation scale 500.0
#---------
number_of attributes 3
     Value Time HOSTL
#---------
number_of resources 7
 AAW MINE ASuW BMD STRK SAR SOF
#---------
number_of nets 2
#---------
renew interval 0.5
#---------
random seed   1
#---------
message number 4
#--------
comm epoch 6.0
#---------
comm delay 5.0
#---------
transfer delay 10.0
#---------
attack delay 2.0
#---------
land area  0.0 200.0 375.0 500.0
land area 375.0 450.0 500.0 500.0
land area 260.0 0.0  320.0 100.0  # Sardenia
```

```
land area 420.0 160.0 500.0 205.0 # Sicily
#--------- roads
draw line 50. 300.  100.  205.   2
draw line 50. 300.  195.  205.   2
#--------- SeaBaselocations
#draw circle  100.0 200.0  10.   1
#draw circle  200.0 200.0  10.   1
#--------- AirBaselocations
#draw circle   50.0 300.0  10.   1
#draw circle  150.0 300.0  10.   1
#--------- Miscellaneous cities
draw circle 5.0   205. 1.0    2
draw circle 315.  95.  1.0    2
draw circle 370.  460. 1.0    2
draw circle 430.  200. 1.0    2
#draw circle 320. 200. 1.0    2
draw circle 415.  455. 1.0    2
#--------- Libya city
draw rectangle  390.0  440.0  50. 20.0  2
#--------- country borders
draw line 250. 200.  250.0  500.   3
draw line 300. 450.  300.0  500.   3
draw line 300. 450.  375.0  450.   3
#--------- sea lanes
draw line   0. 125.  375.0  125.   3
draw line 375. 125.  500.0   50.   3
draw line 375. 125.  425.0  300.   3
draw line 425. 300.  425.0  450.   3
draw line 425. 450.  500.0  425.   3
#--------- air corridors
draw line   5. 205. 150.   50.  1
draw line 100. 200. 150.   50.  1
draw line 200. 200. 150.   50.  1
draw line 320. 200. 150.   50.  1
draw line 150.  50. 160.    0.  1
draw line 150.  50. 100.    0.  1
draw line 100. 200. 315.   95.  1
draw line 320. 200. 315.   95.  1
draw line 400.   0. 315.   95.  1
```

```
      draw line 500. 380. 315.  95.  1

      draw line 370. 460. 500. 275.  1

      draw line 430. 200. 415. 455.  1

      #---------

      penetration number 3

      penetration zone   rectangle    0 260.0    0.0  60.0  100.0    #
Sardenia

      penetration zone   rectangle    1 420.0  160.0  85.0  45.0    #
Sicily

      penetration zone   circle       2 320.0  200.0  12.0         #
Tunis

      #

      #<<<<<<<<<<<<< Platform Class Information >>>>>>>>>>>>>

      #

      platform classes 21

      #---------

      # platform 0: DestroyerA

      platform general 0  S   DDGA  0.000  0

                        0  1  3000.000  3.000  20.000

      platform resource 0    0  0  0  0  0  0  0

      platform range    0

        150.0  35.00  100.00  0.00  10.00

        35.00   8.00  30.00   0.00  15.00

         0.00   0.00   0.00   0.00   0.00

      platform accuracy   0

      0.0  0.0  0.0

      0.0  0.0  0.0

      0.0  0.0  0.0

      #

      #

      # platform 1: DestroyerB

      platform general 1  S   DDGB  0.000  0

                        0  1  3000.000  3.000  20.000

      platform resource 1    0  0  0  0  0  0  0

      platform range    1

        150.0  35.00  100.00  0.00  10.00

        35.00   8.00  30.00   0.00  15.00

         0.00   0.00   0.00   0.00   0.00

      platform accuracy  1

      0.0  0.0  0.0
```

```
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 2: Frigate
platform general 2  S   FFG  0.000  0
                 0 1  3000.000  3.000  20.000
platform resource 2    0  0  0  0  0  0  0
platform range   2
  100.0  35.00  70.00   0.00  10.00
   30.00   8.00  28.00   0.00  15.00
    0.00   0.00   0.00   0.00   0.00
platform accuracy  2
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 3: Cruiser
platform general 3  S   CG  0.000  0
                 0 1  3000.000  3.000  20.000
platform resource 3    0  0  0  0  0  0  0
platform range    3
  180.0  35.00  100.00  0.00  10.00
   40.00   8.00  30.00   0.00  15.00
    0.00   0.00   0.00   0.00   0.00
platform accuracy  3
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 4: aircraft carrier
platform general 4  S   CVN  0.000  0
                 0 1  3000.000  3.000  20.000
platform resource 4    0  0  0  0  0  0  0
platform range    4
  240.0  35.00  150.00  0.00  10.00
   50.00   8.00  30.00   0.00  20.00
```

```
   0.00    0.00    0.00    0.00    0.0
platform accuracy   4
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 5: DestroyerC
platform general 5   S    DDGC   0.000   0
                  0   1   3000.000   3.000   20.000
platform resource 5    0   0   0   0   0   0   0
platform range    5
  150.0   35.00   100.00   0.00   10.00
   35.00    8.00   30.00    0.00   15.00
    0.00    0.00    0.00    0.00    0.00
platform accuracy   5
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 6: E2C (nominally from carrier)
platform general 6   A    E2C   0.00   0
                  0   1   3000.000   3.000   20.000
platform resource 6    0   0   0   0   0   0   0
platform range    6
  250.0    0.00   0.00   0.00   7.5
   60.00    0.00   0.00   0.00   0.0
   30.00    0.00   0.00   0.00   20.0
platform accuracy   6
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 7: fighter aircraft (from CVN/airbase)
platform general 7   A    F18A   3.17   0
                  1   1   900.000   60.000   20.000
platform resource  7    1   0   0   0   0   0   0
```

```
platform attack 7 2
platform range    7
  80.0  20.00  40.00  36.00   3.00 #orig 7.5
  50.0  12.00  25.00   0.00   0.00
   5.0   4.00   2.00   0.00  20.00
platform accuracy    7
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 8: strike a/c package (from CVN/airbase)
platform general 8  A    F18S  3.17  0
                  1  1 900.000  60.000  20.000
platform resource  8    0  0  0  0  2  0  0
platform attack 8 1
platform range    8
  80.0  20.00  40.00   0.00   5.00 #orig 7.5
  50.0  12.00  25.00   3.00   0.00
  30.0  24.00  25.00  15.00  20.00
platform accuracy    8
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 9: MH53 (from surface ships)- 18 min endurance
platform general 9  A    MH53  .60  0
                  1  1 1100.000  60.000  10.000
platform resource  9    0  1  0  0  0  0  0
platform attack 9 2
platform range    9
  60.0   0.00  30.00   0.00   7.50
  30.0  12.00  15.00   0.00   0.00
  10.0   4.00   5.00   0.00  20.00 #beware of SAMs!
platform accuracy    9
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
```

```
#
#
# platform 10: HH60 (from surface ships) - 18 min endurance
platform general 10  A    HH60  .60  0
                  1  1 1100.000  60.000  10.000
platform resource  10    0  0  0  0  0  1  0
platform attack 10 1
platform range    10
  60.0   0.00  30.00   0.00   7.50
  30.0  12.00  15.00  10.00   0.00
  12.0   6.00   8.00  10.00   9.00 #beware of SAMs!
platform accuracy   10
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 11: UAV (from surface ships)- 60min endurance
platform general 11  A    UAV  .54  0
                  1  1  3600.000  30.000  5.000
platform resource  11    0  0  0  0  0  0  0
platform range    11
  20.0  10.00  15.00   0.00   7.50
  35.0  15.00  20.00   0.00   0.00
  38.0  24.00  22.00   0.00  20.00
platform accuracy   11
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#
# platform 17: FGTR (attack boats from surface ships)- 20min
endurance
platform general 17  S    FGTR  .40  0
                  1  1  1200.000  30.000  10.000
platform resource  17    0  0  1  0  0  0  0
platform attack 17 2
platform range    17
  10.0   0.00   5.00   0.00   0.00
```

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```
   35.0   20.00   30.00   15.00   10.00
    0.0    0.00    0.00    0.00    0.00
platform accuracy   17
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 18: SOF/SEALS (pre-inserted)- infinite endurance
platform general 18   G    SOF   .60   0
                 1   1   3600.000   30.000   10.000
platform off_route 18 1
platform resource   18    0  0  0  0  0  0  1
platform range    18
   10.0    0.00    5.00    0.00    0.00
    0.0    0.00    0.00    0.00    0.00
   20.0   10.00   18.00    8.00    5.00
platform accuracy   18
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
# --------------------------------
# the following are the weapons
# --------------------------------
# platform 12: SM2  (standard anti-air missile)
platform general 12   A    SM2   5.28   0
                 0   0   18.9   10.0   1.0
platform weapon 12 1
platform resource   12    1  0  0  0  0  0  0
platform range    12
   0.0   0.0   0.00   6.00   0.00
   0.0   0.0   0.00   0.00   0.00
   0.0   0.0   0.00   0.00   0.00
platform accuracy    12
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
-1.0   -1.0   -1.0
#
```

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```
#
# platform 13: ABM   (standard anti-air/BMD missile)
platform general 13  A    ABM   6.94  0
                 0   0  12.2  10.0  1.0
platform weapon 13 1
platform resource  13    1  0  0  1  0  0  0
platform range    13
  0.0   0.0   0.00 12.00  0.00
  0.0   0.0   0.00  0.00  0.00
  0.0   0.0   0.00  0.00  0.00
platform accuracy   13
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
#
#
# platform 14: TLAM   (tomahawk missile)
platform general 14  A    TLAM  2.08  0
                 0   0  173.0  10.0  20.0
platform weapon 14 1
platform resource  14    0  0  0  0  1  0  0
platform range    14
  0.0   0.0   0.00  0.00  0.00
  0.0   0.0   0.00  0.00  0.00
  0.0   0.0   0.00  5.00  0.00
platform accuracy   14
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
#
#
# platform 15: TTOM   (steerable tactical tomahawk)
platform general 15  A    TTOM  2.08  0
                 0   0  240.0  10.0  20.0
platform resource  15    0  0  0  0  1  0  0
platform range    15
  0.0   0.0   0.00  0.00  0.00
  0.0   0.0   0.00  0.00  0.00
  0.0   0.0   0.00  15.00  0.00
```

```
platform accuracy    15
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
#
#
# platform 16: HARP (harpoon anti-ship missile)
platform general 16  A   HARP  1.39  0
                 0  0  43.0  10.0  5.0
platform weapon 16 1
platform resource  16    0  0  1  0  0  0  0
platform range    16
  0.0   0.0   0.00   0.00   0.00
  0.0   0.0   0.00   3.00   0.00
  0.0   0.0   0.00   0.00   0.00
platform accuracy    16
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
-1.0  -1.0  -1.0
#
#
# platform 19: forward operating base for SOF, also "intel"
platform general 19  G   FOB  0.0  0
                 1  1 3000.000  3.000  20.000
platform resource  19    1 1 1 1 1 1 1
platform range    19
0.00 0.00  0.00  0.00  0.00
0.00 0.00  0.00  0.00  0.00
0.00 0.00  0.00  0.00  0.00
platform accuracy    19
0.0   0.0   0.0
0.0   0.0   0.0
0.0   0.0   0.0
#
#
# platform 20: forward air base for F18, maybe also "intel"
platform general 20  G   AOF  0.0  0
                 1  1 3000.000  3.000  20.000
platform resource  20    0 0 0 0 0 0 0
```

```
platform range    20
  200.0  0.0  50.0  0.0  0.0
     0.0  0.0   0.0  0.0  0.0
     0.0  0.0   0.0  0.0  0.0
platform accuracy    20
0.0  0.0  0.0
0.0  0.0  0.0
0.0  0.0  0.0
#
#---- platform-subplatform structure ----
#
# air BASE with fighters, strike a/c
platform subplatform 20 2
       F18A    F18S
        2       2       # number
        5       5       # owner
# ----------------------------------
#
# FOB with the SOF teams possibly owned by 3 different DMs
platform subplatform 19 3
        SOF     SOF     SOF
         1       1       1      # number
         2       3       6      # owner
# ----------------------------------
#
# CVN carrying fighters, strike a/c, HH60, UAV, FGTR, MH53
platform subplatform  4  6
       F18A    F18S    HH60    UAV    FGTR    MH53
        2       2       1       1       1       1 # number
        1       1       1       1       1       1 # owner
# ----------------------------------
#
# DDGA carrying SM2, ABM, TLAM, HARP, TTOM, HH60, UAV, FGTR
platform subplatform  0  8
    SM2   ABM   TLAM   HARP   TTOM   HH60   UAV   FGTR
     6     3     6      2      4      1      1     1    # number
#    1     0     0      0      0      1      0     0    # owner
     2     2     2      2      2      2      2     2
# ----------------------------------
```

```
#
# DDGB carrying SM2, ABM, TLAM, HARP, TTOM, HH60, UAV, FGTR
platform subplatform  1  8
    SM2  ABM  TLAM  HARP  TTOM  HH60  UAV  FGTR
     6    3    6     2     4     1    1    1    # number
#    0    0    0     0     0     0    0    0    # owner
     3    3    3     3     3     3    3    3
# ----------------------------------
#
# CG carrying SM2, ABM, TLAM, HARP, MH53, UAV, FGTR, HH60
platform subplatform  3  8
    SM2  ABM  TLAM  HARP  MH53  UAV  FGTR  HH60
     6    3    6     2     1     1    1     1  # number
#    0    0    0     0     0     0    0     0 # owner
     4    4    4     4     4     4    4     4
# ----------------------------------
#
# FFG carrying SM2, HARP, MH53, UAV, FGTR,  HH60
platform subplatform  2  6
    SM2  HARP  MH53 HH60  UAV  FGTR
     4    2     1    1     1     1  # number
#    0    0     0    0     0     0  # owner
     5    5     5    5     5     5
# ----------------------------------
#
# DDGC carrying SM2, ABM, TLAM, HARP, TTOM, HH60, UAV, FGTR
platform subplatform  5  8
    SM2  ABM  TLAM  HARP  TTOM  HH60  UAV  FGTR
     6    3    6     2     4     1    1    1    # number
#    0    0    0     0     0     0    0    0    # owner
     6    6    6     6     6     6    6    6
# ------ end of platform subplatform structure ---------
#
#<<<<<<<<<<<< Task Class Information >>>>>>>>>>
number_of clusters 22
#
task cluster  0 G NB
task cluster  1 G CMD truck.icon
task cluster  2 S ?? ship.icon
```

```
task cluster  3 G CDL artillery.icon
task cluster  4 G SML silkworm.icon
task cluster  5 A ?? air.icon
task cluster  6 G AB
task cluster  7 G SAM sam.icon
task cluster  8 A CDM missle.icon
task cluster  9 A MIS silkworm.icon
task cluster 10 S MIN mines.icon
task cluster 11 A XOC missle.icon
task cluster 12 G EW
task cluster 13 S S&R cross.icon
task cluster 14 G RGF tank.icon
task cluster 15 G SML silkworm.icon
task cluster 16 G BR  bridge.icon
task cluster 17 A TSK
task cluster 18 S TSK task.icon  #complex sea
task cluster 19 G UT task.icon  #UT ground
task cluster 20 S UT task.icon  #UT sea
task cluster 21 G SAM sam.icon
#
task classes 41
#---------
# task 0: Naval Base (East)
task general 0  G  NBE  0.0  0.1  9  norfolk.icon
cluster member 0 0
task name 0 East_Naval_Base
task mean  0   50.0  40.0  1.0
task attack  0  0   1 1 1 1 1 1 1 0
task mapping 0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    2.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
task stealth 0   7   80.0  20.0  40.0  36.0  3.0 #so F18A can attack
task stealth 0  12    0.0  0.0  0.0  0.0  0.0 # so SM2 can't be used
task stealth 0  19  600.0  600.0  600.0  0.0  0.0
```

```
#
# task 1: Naval Base (West)
task general 1  G  NBW  0.0  0.1  9  norfolk.icon
cluster member 1 0
task name 1 West_Naval_Base
task mean  1  50.0  40.0  1.0
task attack  1  0   1 1 1 1 1 1 1 0
task mapping 1
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    3.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 1  17  20.0  15.0  18.0  12.0  0.0 #so FGTR can attack
task stealth 1  19  600.0  600.0  600.0  0.0  0.0
#
# task 2: Command center
task general 2  G  CMD  0.0  0.1  9  truck.icon
cluster member 2 1
task name 2 command_ctr
task mean 2  25.0  20.0  1.0
task attack  2  0  1 1 1 1 1 1 1 0
task mapping 2
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
task stealth 2  19  600.0  600.0  600.0  0.0  0.0
#
# task 3: sea contacts (enemy destroyer)
task general 3  S  DG  0.14  0.1  1  ship.icon
cluster member 3 2
task name 3 Enemy_Destroyer
task mean 3  25.0  10.0  1.0
```

```
task attack  3  0  1 1 1 1 1 1 1 0
task mapping 3
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
# enemy destroyer can fire missles at 25 miles out
task stealth 3  0    35.0  8.0   30.0  0.0   25.0
task stealth 3  1    35.0  8.0   30.0  0.0   25.0
task stealth 3  2    30.0  8.0   28.0  0.0   25.0
task stealth 3  3    40.0  8.0   30.0  0.0   25.0
task stealth 3  4    50.0  8.0   30.0  0.0   25.0
task stealth 3  5    35.0  8.0   30.0  0.0   25.0
task stealth 3  7    50.0  12.0  25.0  20.0  3.0 #so F18A can attack
#
# task 4: sea contacts (fast patrol boats)
task general 4  S   PT   0.20  0.1  2   ship.icon
cluster member 4 2
task name 4 Enemy_Patrol_Boat
task mean 4   5.0   5.0   1.0
task attack  4  0  1 1 1 1 1 1 1 0
task mapping 4
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 5: ground (Coastal Defense missile battery)
# made a TF = 5 to indicate time critical value
task general 5  G   CDL  0.09  0.1  5   artillery.icon
cluster member 5 3
task name 5 CD_Launcher
task mean  5  2.0  5.0  1.00
```

```
task attack  5  0  1 1 1 1 1 1 1 0
task mapping 5
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
#
# task 6: ground (SCUD missile launcher)
# made a TF = 5 to indicate time critical value
task general 6  G   SML   0.06   0.1   5   silkworm.icon
cluster member 6 4
task name 6 SCUD_launcher
task mean  6     5.0   10.0   1.00
task attack  6   0   1 1 1 1 1 1 1 0
task mapping 6
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
#
# task 7: air attackers of tailorable size
task general 7  A   AC   2.0   0.1   3   air.icon
cluster member 7 5
task name 7 hostile_air
task mean 7   5.0   5.0   1.00
task attack  7   0   1 1 1 1 1 1 1 0
task mapping 7
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
```

```
0.0  0.0  0.0    0.0
#
# task 8: Air Base (East)
task general 8  G  ABE  0.0  0.1  9  dullas.icon
cluster member 8 6
task name 8 Air_Base_East
task mean  8  50.0  40.0  1.0
task attack  8  0  1 1 1 1 1 1 1 0
task mapping 8
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    2.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
task stealth 8  19  600.0  600.0  600.0  0.0  0.0
task stealth 8  12   0.0  0.0  0.0  0.0  0.0 # so SM2 can't be used
task stealth 8   7   80.0  20.0  40.0  36.0  3.0 #so F18A can attack
#
# task 9: Air Base (West)
task general 9  G  ABW  0.0  0.1  9  dullas.icon
cluster member 9 6
task name 9 Air_Base_West
task mean  9  50.0  40.0  1.0
task attack  9  0  1 1 1 1 1 1 1 0
task mapping 9
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    3.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 9  19  600.0  600.0  600.0  0.0  0.0
#
# task 10: SAM sites- stationary and protected
task general 10  G  SAM  0.0  0.1  3  sam.icon
cluster member 10 7
```

```
task name 10 SAM_site
task mean 10  5.0  20.0  1.00
task attack  10   0   1 1 1 1 1 1 1 0
task mapping 10
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
task stealth 10   7 30.0  24.00  28.00   0.00  20.00  #F18A
task stealth 10   8 30.0  24.00  28.00  15.00  20.00  #F18S
task stealth 10   9 25.0  25.00  25.00   0.00  20.00  #MH53
task stealth 10 10 15.0  15.00  15.00   0.00   7.00  #HH60
task stealth 10 11 40.0  24.00  38.00   0.00  20.00  #UAV
#
# task 11: air contacts (commair)
task general 11  A   NU 1.25  0.1  0   smiley.icon
cluster member 11 5
task name 11 commercial_air
task mean 11  75.0  5.0  0.00
task attack  11   0   1 1 1 1 1 1 1 0
task mapping 11
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 12: sea contacts (merchant)
task general 12  S   NU  0.09  0.1  0   smiley.icon
cluster member 12 2
task name 12 merchant_ship
task mean  12  75.0  5.0  0.00
task attack  12   0   1 1 1 1 1 1 1 0
task mapping 12
```

```
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 13: missile - spawned by a CD launcher
# may wish to make this TF=2 and type =S
# combine with class 16?
task general 13  A  CDM  1.00  0.1  3  missle.icon
cluster member 13 8
task name 13 CD_missle
task mean  13   5.0  5.0  1.00
task attack 13  0   1 1 1 1 1 1 1 0
task mapping 13
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 13   6  250.  0.   0.   0.0  0.0
task stealth 13   7  20.   0.  10. 36.0  0.0
task stealth 13   8  20.   0.  10.  0.0  0.0
task stealth 13   9  15.   0.   8.  0.0  0.0
task stealth 13  10  15.   0.   8.  0.0  0.0
task stealth 13  11  10.   0.   5.  0.0  0.0
#
# task 14: SCUD missile - fired by a SCUD launcher
task general 14  A  MIS  1.67  0.1  1  silkworm.icon
cluster member 14 9
task name 14 SCUD_missle
task mean  14   10.0  5.0  1.00
task attack 14  0   1 1 1 1 1 1 1 0
task mapping 14
0.0  0.0  0.0    0.0
```

```
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     1.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
#
# task 15: sea contacts ("drifting" mines)
task general 15  S   MIN   .03  0.1  2  mines.icon
cluster member 15 10
task name 15 mine_field
task mean 15  10.0  10.0  1.00
task attack  15  0   1 1 1 1 1 1 1 0
task mapping 15
0.0  0.0  0.0     1.0
0.0  0.0  0.0     1.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
0.0  0.0  0.0     0.0
task stealth 15  6     0.0   0.0    0.0  0.0    0.0
task stealth 15  7     0.0   0.0    0.0  20.0   0.0 #so F18A can defend
MH53
task stealth 15  8     0.0   0.0    0.0  0.0    0.0
task stealth 15  9     13.0  0.0    0.0  10.0   0.0   #MH53
task stealth 15  10   2.0   0.0    0.0  0.0    0.0
task stealth 15  11   0.0   0.0    0.0  0.0    0.0
task stealth 15  12   0.0   0.0    0.0  0.0    0.0  # so SM2 can't be
used
task stealth 15  17  20.0 12.0  18.0  0.0   13.0  #FGTR
#
# task 16: Exocet missile - fired by Destroyer
# may wish to make this TF=2 and type =S
task general 16  A   XOC  1.3  0.1  3  missle.icon
cluster member 16 11
task name 16 Exocet
task mean  16   5.0   5.0  1.00
task attack 16  0    1 1 1 1 1 1 1 0
task mapping 16
```

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```
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 16    6   250.   0.    0.   0.0   0.0
task stealth 16    7   20.    0.   10.  36.0   0.0
task stealth 16    8   20.    0.   10.   0.0   0.0
task stealth 16    9   15.    0.    8.   0.0   0.0
task stealth 16   10   15.    0.    8.   0.0   0.0
task stealth 16   11   10.    0.    5.   0.0   0.0
#
# task 17: Possible hostile air (yes)
task general 17   A   PH   1.75   0.1   3   air.icon
cluster member 17 5
task name 17 possible_hostile
task mean 17    10.0   5.0   1.00
task attack  17   0   1 1 1 1 1 1 1 0
task mapping 17
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
# these go after big ships -- not aircraft
task stealth 17    6   250.   0.    0.   0.0   0.0
#task stealth 17    7   80.   20.   40.  36.0   3.0
task stealth 17    8   80.   20.   40.   0.0   3.0
task stealth 17    9   60.    0.   30.   0.0   3.0
task stealth 17   10   60.    0.   30.   0.0   3.0
task stealth 17   11   20.   10.   15.   0.0   3.0
#
# task 18: Possible hostile air (no)
task general 18   A   PH   1.75   0.1   0   air.icon
cluster member 18 5
```

```
task name 18 possible_hostile
task mean 18  75.0  5.0  0.00
task attack  18  0  1 1 1 1 1 1 1 0
task mapping 18
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 19: Possible hostile ship (yes)
task general 19  S  PH  .20  0.1  2  ship.icon
cluster member 19 2
task name 19 possible_hostile
task mean 19   10.0  5.0  1.00
task attack  19  0  1 1 1 1 1 1 1 0
task mapping 19
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 20: Possible hostile ship (no)
task general 20  S  PH  .20  0.1  0  ship.icon
cluster member 20 2
task name 20 possible_hostile
task mean 20  75.0  5.0  0.00
task attack  20  0  1 1 1 1 1 1 1 0
task mapping 20
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
#
# task 21: MOBILE SAM sites- protected
task general 21  G  SA3  0.06  0.1  3  sam.icon
cluster member 21 21
task name 21 mobile_SAM
task mean 21  5.0  20.0  1.00
task attack 21  0  1 1 1 1 1 1 1 0
task mapping 21
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
task stealth 21   7 30.0   24.00   25.00    0.00   10.00   #F18A
task stealth 21   8 30.0   24.00   26.00   15.00   10.00   #F18S
task stealth 21   9 25.0   25.00   25.00    0.00   12.00   #MH53
task stealth 21 10 15.0   15.00   15.00    0.00    5.00   #HH60
task stealth 21 11 30.0   25.00   25.00    0.00   12.00   #UAV
task stealth 21 14  0.0   0.0   0.0   0.0   0.0 #can't hit with TLAM
task stealth 21 15  0.0   0.0   0.0   0.0   0.0 #can't hit with TTOM
#
# task 22: intel on possible launch
task general 22  G  EW  0.0  0.1  0  task.G.icon
cluster member 22 12
task name 22 possible_launch
task mean 22   0.0  2.0  0.00
task attack  22  0  0 0 0 0 0 0 0 0
task mapping 22
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
```

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```
task stealth 22  19    600.0   0.0    0.0    0.0  0.0
#
# task 23: rescue effort at sea (may wish to make TF=9)
task general 23  S   S&R   0.0  0.1   5   cross.icon
cluster member 23 13
task name 23 rescue_effort
task mean 23    10.0   10.0   0.00
task attack  23   0   1 1 1 1 1 1 1 0
task mapping 23
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     1.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     1.0
0.0   0.0   0.0     0.0
task stealth 23  10     30.0   15.0   25.0   10.0  0.0
task stealth 23  16      0.0   0.0    0.0    0.0   0.0 # so can't use HARP
task stealth 23  19    700.0   700.0  700.0   0.0  0.0
#
# task 24: air recon
task general 24  A   REC   1.5   0.1   1   air.icon
cluster member 24 5
task name 24 recon_air
task mean 24  2.0   5.0   1.00
task attack  24   0   1 1 1 1 1 1 1 0
task mapping 24
0.0   0.0   0.0     1.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
#
# task 25: enemy ground unit
task general 25  G   RGF   0.0  0.1   2   tank.icon
cluster member 25 14
task name 25 Enemy_ground_force
```

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```
task mean 25   5.0  30.0  1.00
task attack  25  0  1 1 1 1 1 1 1 0
task mapping 25
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
task stealth 25  6   5.0  0.0    0.0   0.0   0.0
task stealth 25  7   2.0  0.0   1.50   0.0   2.0
task stealth 25  8   2.0  0.0   1.50  10.0   2.0
task stealth 25  9   2.0  0.0   1.50   0.0   2.0
task stealth 25  10  2.0  0.0   1.50   0.0   2.0
task stealth 25  11  2.0  0.0   1.50   0.0   2.0   #UAV CAN'T see them
task stealth 25  18  25.0 22.0   20.0  8.0  15.0   #danger for SOF
#
# task 26: ground (SCUD missile SECOND launcher)
# made a TF = 5 to indicate time critical value
task general 26  G   SML  0.06  0.1  5  silkworm.icon
cluster member 26 15
task name 26 SCUD_launcher
task mean  26   2.0  10.0  1.00
task attack  26  0  1 1 1 1 1 1 1 0
task mapping 26
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    1.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 27: "nothing there" sea report confuse with S&R -- if needed
task general 27  S   S&R  0.0   0.1  0  cross.icon
cluster member 27 13
task name 27 rescue_effort
task mean  27  0.0  2.0  0.00
```

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```
task attack 27  0   0 0 0 0 0 0 0 0
task mapping 27
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 27  10     30.0   15.0   25.0   10.0   0.0
task stealth 27  19    700.0    0.0    0.0    0.0   0.0
#
# task 28: a major bridge
task general 28  G   BR   0.0   0.1   9   bridge.icon
cluster member 28 16
task name 28 major_bridge
task mean 28   30.0   30.0   1.0
task attack  28  0   1 1 1 1 1 1 1 0
task mapping 28
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
task stealth 28  19  600.0   600.0   600.0   0.0   0.0
#
# task 29: final seaport
task general 29  G   PRT   0.0   0.1   9   norfolk.icon
cluster member 29 0
task name 29 capture_port
task mean 29   50.0   40.0   1.0
task attack  29  0   1 1 1 1 1 1 1 0
task mapping 29
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      1.0
task stealth 29   19   600.0   600.0   600.0   0.0   0.0
task stealth 29    7   80.0   20.0   40.0   36.0   3.0 #so F18A can attack
task stealth 29   10   30.0   15.0   25.0   10.0   0.0 #so HH60 can attack
task stealth 29   17   20.0   15.0   18.0   12.0   0.0 #so FGTR can attack
task stealth 29   12    0.0    0.0    0.0    0.0   0.0 # so can't use SM2
task stealth 29   16    0.0    0.0    0.0    0.0   0.0 # so can't use HARP
#
# task 30: a complex SEA task-1
task general 30   S   TSK   0.0   0.1   5   crusty.icon
cluster member 30 18
task name 30 complex_task
task mean 30   40.0   30.0   1.0
task attack   30   0   1 1 1 1 1 1 1 0
task mapping 30
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
task stealth 30    7   0.0   0.0    0.0   20.0    0.0 #so F18A can protect
task stealth 30    9   13.0   0.0    0.0   10.0   0.0  #MH53
task stealth 30   12   0.0   0.0   0.0   0.0   0.0 # so can't use SM2
task stealth 30   16   0.0   0.0   0.0   0.0   0.0 # so can't use HARP
task stealth 30   19   600.0   600.0   600.0   0.0   0.0
#
# task 31: a complex SEA task-2
task general 31   S   TSK   0.0   0.1   9   crusty.icon
cluster member 31 18
task name 31 complex_task
task mean 31   40.0   30.0   1.0
task attack   31   0   1 1 1 1 1 1 1 0
task mapping 31
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
```

```
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
task stealth 31    7   0.0   0.0    0.0   20.0    0.0 #so F18A can protect
task stealth 31    9  13.0   0.0    0.0   10.0   0.0  #MH53
task stealth 31   12   0.0   0.0   0.0   0.0   0.0 # so can't use SM2
task stealth 31   16   0.0   0.0   0.0   0.0   0.0 # so can't use HARP
task stealth 31   19  600.0  600.0  600.0  0.0   0.0
#
# task 32: a complex SEA task-3
task general 32   S   TSK   0.0   0.1   5   crusty.icon
cluster member 32 18
task name 32 complex_task
task mean 32   40.0   30.0   1.0
task attack  32   0   1 1 1 1 1 1 1 0
task mapping 32
0.0   0.0   0.0      1.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
task stealth 32    7   0.0   0.0    0.0   20.0    0.0 #so F18A can protect
task stealth 32    9  13.0   0.0    0.0   10.0   0.0  #MH53
task stealth 32   12   0.0   0.0   0.0   0.0   0.0 #so can't use SM2
task stealth 32   19  600.0  600.0  600.0  0.0   0.0
#
# task 33: a UT GROUND task
task general 33   G   EVA   0.0   0.1   5   cross.icon
cluster member 33 19
task name 33 evacuate wounded
task mean 33   20.0   30.0   0.0
task attack  33   0   1 1 1 1 1 1 1 0
task mapping 33
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
0.0   0.0   0.0      1.0
task stealth 33  10    15.0    6.0    8.0   10.0   0.0
task stealth 33  19  700.0  700.0  700.0   0.0   0.0
#
# task 34: a UT SEA task-1
task general 34   S   GUN   0.20   0.1   1   ship.icon
cluster member 34 2
task name 34 gun_runner
task mean 34   10.0   20.0   1.0
task attack   34   0   1 1 1 1 1 1 1 0
task mapping 34
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
#task stealth 34   19   600.0   600.0   600.0   0.0   0.0
#
# task 35: a UT SEA task-2
task general 35   S   UT   0.0   0.1   9   take.icon
cluster member 35 20
task name 35 unanticipated_task
task mean 35   50.0   60.0   1.0
task attack   35   0   1 1 1 1 1 1 1 0
task mapping 35
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      1.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
task stealth 35   19   600.0   600.0   600.0   0.0   0.0
```

```
#
# task 36: a UT SEA task-3
task general 36   S   UT   0.0   0.1   9   take.icon
cluster member 36 20
task name 36 unanticiapted_task
task mean 36   50.0   60.0   1.0
task attack  36   0   1 1 1 1 1 1 1 0
task mapping 36
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     1.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
task stealth 36   19   600.0   600.0   600.0   0.0   0.0
#
# task 37: Enemy air defenders
task general 37   A   CAP   2.0   0.1   2   air.icon
cluster member 37 5
task name 37 enemy_CAP
task mean 37   10.0   20.0   1.00
task attack  37   0   1 1 1 1 1 1 1 0
task mapping 37
0.0   0.0   0.0     2.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
0.0   0.0   0.0     0.0
task stealth 37   7   50.0   20.00   40.00   36.00     20.00
task stealth 37   8   50.0   20.00   40.00   0.00     27.00
#
# task 38: Hostile air (yes) of a different nature
task general 38   A   PH   1.75   0.1   3   air.icon
cluster member 38 5
task name 38 possible_hostile
task mean 38    5.0   5.0   1.00
```

```
task attack  38  0  1 1 1 1 1 1 1 0
task mapping 38
0.0  0.0  0.0    2.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
# these go after big ships -- not aircraft
task stealth 38    6  250.  0.   0.  0.0  0.0
#task stealth 38    7  80.  20.  40. 36.0  3.0
task stealth 38    8  80.  20.  40.  0.0  3.0
task stealth 38    9  60.   0.  30.  0.0  3.0
task stealth 38  10  60.   0.  30.  0.0  3.0
task stealth 38  11  20.  10.  15.  0.0  3.0
#
# task 39: Hostile ship (yes) of a different nature
task general 39  S  PH  .20  0.1  2  ship.icon
cluster member 39 2
task name 39 possible_hostile
task mean 39   5.0  2.0  1.00
task attack  39  0  1 1 1 1 1 1 1 0
task mapping 39
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    2.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
0.0  0.0  0.0    0.0
#
# task 40: SAM clusters
task general 40  G  SA6  0.06  0.1  3  sam.icon
cluster member 40 7
task name 40 SAM_cluster
task mean 40  5.0  10.0  1.00
task attack 40  0  1 1 1 1 1 1 1 0
task mapping 40
```

```
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      2.0
0.0   0.0   0.0      0.0
0.0   0.0   0.0      0.0
#aircraft cannot get within 38 miles
task stealth 40  7 55.0  25.00  55.00   0.00  38.00  #F18A
task stealth 40  8 55.0  25.00  55.00  15.00  38.00  #F18S
task stealth 40  9 55.0  25.00  55.00   0.00  38.00  #MH53
task stealth 40 10 25.0  25.00  25.00   0.00   9.00  #HH60
task stealth 40 11 55.0  25.00  55.00   0.00  38.00  #UAV
#
# ------------------------
# TASK HELP INFORMATION
#
task help 0 3
Capturing NBE will require 1 Anti-Air unit (1 F18-A), 2 STRK units,
and 1 SOF team. Note any prerequisites that may be required
before completing this task.
#
task help 1 3
Destroying this naval base (NBW) will require
3 STRK units. The time window to successfully
detroy the target is 40 seconds.
#
task help 2 2
To neutralize the enemy CMD CTR it will
require 1 STRK unit and 1 SOF team.
#
task help 3 3
This is an enemy destroyer capable of launching surface to surface
missiles and laying mines.  1 Anti-Surface unit and 1 Anti-Air unit
is required to destroy this ship.
#
task help 4 2
This is an enemy fast patrol boat.  1 Anti-Surface
unit is required to destroy this platform.
```

```
#

task help 5 3

This is an enemy Coastal Defense Laucher capable of launching cruise

missiles at surface targets.  1 STRK unit is required to

destroy this target.

#

task help 6 3

This is a Scud Missile Launcher. 1 Strike unit is required

to destroy this target.  Be careful, some are protected by

Surface to Air Missile Launchers.

#

task help 7 2

This is an enemy fighter aicraft. 1 Anti-Air unit is required

to destroy this platform.

#

task help 8 3

Capturing this Air Base (ABE) will require 1 Anti-Air (1 F18-A) unit,
2 STRK units,

and 1 SOF team.  Beware of enemy ground forces when using the SOF
teams.

Note any prerequisites required to be completed before beginning this
task.

#

task help 9 3

Destroying this Air Base (ABW) will require 3 STRK units.

Note any prerequisites required to be completed before

beginning this task.

#

task help 10 2

This is an enemy surface to air missile site. 1 STRK

units and 1 SOF team is required to destroy this target.

#

task help 11 2

This is neutral commercial air.  There are penalties for firing

on neutral platforms.

#

task help 12 2

This is neutral commercial merchant shipping.  There are penalties

for firing on neutral platforms.

#
```

task help 13 2

This is an enemy coastal defense missile launched from a coastal defense

launcher. 1 Anti-Air unit is rquired to detroy this target.

#

task help 14 2

This is an enemy Scud Missile most likely targeting one of the neutral

countries. 1 Anti-Ballistic Missile is required to destroy this target.

#

task help 15 2

This is an enemy mine field. 1 Anti-Mine unit and 1 Anti-Air unit (1 F18-A) is

required to remove and safely detonate these mines.

#

task help 16 2

This is an Exocet missile most likely fired by an enemy Destroyer.

1 Anti-Air unit is required to detroy this target.

#

task help 17 3

This is a possible hostile aircraft. You must get positive ID on

this asset in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 18 3

This is a possible hostile aircraft. You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 19 3

This is a possible hostile ship. You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 20 3

This is a possible hostile ship. You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 21 3

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This is a mobile Surface to Air Missile Site. Since the exact location may have changed

since the last intel was received, it is required to use Strike Aircraft in order to

detroy this target. 2 STRK units (1 f18-S) and 1 SOF team is required to destroy this target.

        #

        task help 22 2

        This is an early warning on a possible scud launch received from intelligence.

        Investigate with ISR in order to locate and destroy the Scud Launcher.

        #

        task help 23 2

        This is a Search and Rescue (SAR) effort. 1 Anti-Surface unit and 1 SAR

        unit is required to successfully complete this task.

        #

        task help 24 2

        This is an enemy reconnassaince aircraft. This contact has shown no aggression

        towards our forces.

        #

        task help 25 2

        This is a camouflaged enemy ground force. 1 STRK unit and 1 SOF team (to designate)

        are required to destroy these enemy forces.

        #

        task help 26 3

        This is a Scud Missile Launcher. 1 STRK unit is required

        to destroy this target. Be careful, some may be protected by

        Surface to Air Missile Launchers.

        #

        task help 27 1

        This is believed to be a false distress signal.

        #

        task help 28 3

        This is an enemy bridge which provides a link to one or more of the enemy's

        bases and fortifications. 1 SOF team and 2 STRK units are required to destroy

        the bridge.

        #

task help 29 3

This is the port where the government officials are being held. You must capture this port and

free the hostages. 1 SOF team, 1 SAR unit, 1 Anti-Surface unit (1 FGTR), and 1 Anti-Air unit (1 F18-A)

is required to complete this task. Note any prerequisites required to be completed before beginning this task.

#

task help 30 3

Friendly F-14 down. Pilot has reported enemy aircraft and fast boats in his vicinity.

This is a combat Search and Rescue mission. 1 unit of Anti-Air, 1 unit of Anti-Surface,

and 1 unit of SAR will be required to complet this task.

#

task help 32 3

A ship has hit a mine and is under attack by enemy aircraft. This is a combat Search

and Rescue mission. 1 unit of Anti-Air, 1 unit of Mines, and 1 unit of SAR are required

to complete this task.

#

task help 34 3

This ship is trying to run weapons to the Seaport in the occupied

country. Destroy it before it reaches the port to resupply enemy forces.

2 Anti-Surface units are required to detroy this platform.

#

task help 37 2

This is an enemy air attack wave who's mission is to defend valuable enemy assets.

1 Anti-Air unit is required to detroy this platform.

#

task help 38 3

This is a possible hostile aircraft. You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

#

task help 39 3

This is a possible hostile ship. You must get positive ID on

this contact in order to determine if it is actually hostile or not.

There are penalties for firing on non-hostile units.

```
#

task help 40 3

This is a surface to air missile site cluster designed to provide 360
degrees of covered to a valuable

enemy asset.  2 STRK units are required to detroy this target.  Note
that the valuable asset being

protected by this SAM cluster will not be visible to your sensors
until this cluster is detroyed.

#

# ------------------------

task penetration 0   0 0 0

task penetration 1   0 0 0

task penetration 2   0 0 0

task penetration 3   0 0 0

task penetration 4   0 0 0

task penetration 5   0 0 0

task penetration 6   0 0 0

task penetration 7   0 0 0

task penetration 8   0 0 0

task penetration 9   0 0 0

task penetration 10   0 0 0

task penetration 11   0 0 0

task penetration 12   0 0 0

task penetration 13   0 0 0

task penetration 14   1 1 1

task penetration 15   0 0 0

task penetration 16   0 0 0

task penetration 17   1 1 0

task penetration 18   0 0 0

task penetration 19   0 0 0

task penetration 20   0 0 0

task penetration 21   0 0 0

task penetration 22   0 0 0

task penetration 23   0 0 0

task penetration 24   0 0 0

task penetration 25   0 0 0

task penetration 26   0 0 0

task penetration 27   0 0 0

task penetration 28   0 0 0

task penetration 29   0 0 0
```

```
task penetration 34  0 0 1

task penetration 37  0 0 0

task penetration 38  0 0 0

task penetration 39  0 0 0

#

end_of_class_info

#

#<<<<<<<<<<<<<< State Information >>>>>>>>>>>>>>

#

platform number  10

# ---------- PLATFORM LOCATIONS ---------------

platform definition  1  CVN   1  200.00 100.00

platform definition  2  DDGA  2  120.00 150.00

platform definition  3  DDGB  3  430.00 240.00

platform definition  4  CG    4  280.00 150.00

platform definition  5  FFG   5  440.00 380.00

platform definition  6  DDGC  6  370.00 150.00

# -------------------------------------------

platform definition  7  E2C   1  200.00 150.00

platform definition  8  E2C   5  400.00 250.00

platform definition  9  AOF   0  430.00 197.00

platform definition  0  FOB   0  100.00 330.00

#

#-----------------------------------

#<<<<<<<<<TASK DEFINITIONS>>>>>>>>>>>>

#-----------------------------------

# Major mission tasks (bases, cmd ctr, bridge, ...)

#-----------------------------------

 task definition  200  02 0 0  #command ctr

#

 task definition  201  28 0 0  #bridge1

#

 task definition  202  28 0 0  #bridge2

#

 task definition  203  01 0 0  #NBW

#

 task definition  204  28 0 0

#

 task definition  205  15 0 0  #mines
```

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```
#
 task definition  206  15 0 0  #mines @ NBE
#
 task definition  212  29 0 0  #Tunis (final objective)
#
 task definition  213  31 0 0
#
 task definition  211  00 0 0  #NBE
#
 task definition  207  21 0 0  #SA3
#
 task definition  208  21 0 0  #SA3
#
 task definition  209  09 0 0  #ABW
#
 task definition  210  08 0 0  #ABE
#
 task definition  214  29 0 0
#
 task definition  215  29 0 0
#----------------------------------
# Fast Patrol Craft (N=16)
#----------------------------------
 task definition  216  04 0 0
#
 task definition  217  04 0 0
#
 task definition  218  04 0 0
#
 task definition  219  04 0 0
#
 task definition  220  04 0 0
#
 task definition  221  04 0 0
#
 task definition  222  04 0 0
#
 task definition  223  04 0 0
#
```

```
 task definition  224  04 0 0
#
 task definition  225  04 0 0
#
 task definition  226  04 0 0
#
 task definition  227  04 0 0
#
 task definition  228  04 0 0
#
 task definition  229  04 0 0
#
 task definition  230  04 0 0
#
 task definition  231  04 0 0
#-----------------------------------
# Coastal Defense missile launchers (N=22)
#-----------------------------------
 task definition  232  5 0 0
#
 task definition  233  5 0 0
#
 task definition  234  5 0 0
#
 task definition  235  5 0 0
#
 task definition  236  5 0 0
#
 task definition  237  5 0 0
#
 task definition  238  5 0 0
#
 task definition  239  5 0 0
#
 task definition  240  5 0 0
#
 task definition  241  5 0 0
#
 task definition  242  5 0 0
```

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```
#
 task definition  243  5 0 0
#
 task definition  244  5 0 0
#
 task definition  245  5 0 0
#
 task definition  246  5 0 0
#
 task definition  247  5 0 0
#
 task definition  248  5 0 0
#
 task definition  249  5 0 0
#
 task definition  250  5 0 0
#
 task definition  251  5 0 0
#
 task definition  252  5 0 0
#
 task definition  253  5 0 0
#-----------------------------------
# Red Ground forces (N=4)
#-----------------------------------
 task definition  254  25 0 0
#
 task definition  255  25 0 0
#
 task definition  256  25 0 0
#
 task definition  257  25 0 0
#-----------------------------------
# Complex Sea Tasks   (N=4)
#-----------------------------------
 task definition  258  30 0 0
#
 task definition  259  30 0 0
#
```

```
 task definition  260  32 0 0
#
 task definition  261  32 0 0
#-----------------------------------
# SCUD missile launchers (N=28, most in pairs)
#-----------------------------------
 task definition  262  6 0 0
#
 task definition  263  26 0 0 #S262
#
 task definition  264  6 0 0
#
 task definition  265  26 0 0 #S264
#
 task definition  266  6 0 0
#
 task definition  267  26 0 0 #S266
#
 task definition  268  6 0 0
#
 task definition  269  26 0 0 #S268
#
 task definition  270  6 0 0
#
 task definition  271  26 0 0 #S270
#
 task definition  272  6 0 0
#
 task definition  273  26 0 0 #S272
#
 task definition  274  6 0 0
#
 task definition  275  26 0 0 #S274
#
 task definition  276  6 0 0
#
 task definition  277  26 0 0 #S276
#
 task definition  278  6 0 0
```

```
#
 task definition  279  26 0 0 #S278
#
 task definition  280  6 0 0
#
 task definition  281  26 0 0 #S280
#
 task definition  282  6 0 0
#
 task definition  283  26 0 0 #S282
#
 task definition  284  6 0 0
#
 task definition  285  26 0 0 #S284
#
 task definition  286  6 0 0
#
 task definition  287  26 0 0 #S286
#
 task definition  288  6 0 0 #S if attack 254
#
 task definition  289  6 0 0 #S if attack 255
#-----------------------------------
# SCUD missiles (N=28 maximum)
#-----------------------------------
 task definition  290  14 0 0 #S262
#
 task definition  291  14 0 0 #S263
#
 task definition  292  14 0 0 #S264
#
 task definition  293  14 0 0 #S265
#
 task definition  294  14 0 0 #S266
#
 task definition  295  14 0 0 #S267
#
 task definition  296  14 0 0 #S268
#
```

```
task definition  297  14 0 0 #S269
#
task definition  298  14 0 0 #S270
#
task definition  299  14 0 0 #S271
#
task definition  300  14 0 0 #S272
#
task definition  301  14 0 0 #S273
#
task definition  302  14 0 0 #S274
#
task definition  303  14 0 0 #S275
#
task definition  304  14 0 0 #S276
#
task definition  305  14 0 0 #S277
#
task definition  306  14 0 0 #S278
#
task definition  307  14 0 0 #S279
#
task definition  308  14 0 0 #S280
#
task definition  309  14 0 0 #S281
#
task definition  310  14 0 0 #S282
#
task definition  311  14 0 0 #S283
#
task definition  312  14 0 0 #S284
#
task definition  313  14 0 0 #S285
#
task definition  314  14 0 0 #S286
#
task definition  315  14 0 0 #S287
#
task definition  316  14 0 0 #S288
```

```
#
 task definition  317  14 0 0  #S289
#----------------------------------
# CD (Exocet-like) missiles (N=22)
#----------------------------------
 task definition  318  13 0 0  #S232
#
 task definition  319  13 0 0  #S233
#
 task definition  320  13 0 0  #S234
#
 task definition  321  13 0 0  #S235
#
 task definition  322  13 0 0  #S236
#
 task definition  323  13 0 0  #S237
#
 task definition  324  13 0 0  #S238
#
 task definition  325  13 0 0  #S239
#
 task definition  326  13 0 0  #S240
#
 task definition  327  13 0 0  #S241
#
 task definition  328  13 0 0  #S242
#
 task definition  329  13 0 0  #S243
#
 task definition  330  13 0 0  #S244
#
 task definition  331  13 0 0  #S245
#
 task definition  332  13 0 0  #S246
#
 task definition  333  13 0 0  #S247
#
 task definition  334  13 0 0  #S248
#
```

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```
 task definition  335  13 0 0  #S249
#
 task definition  336  13 0 0  #S250
#
 task definition  337  13 0 0  #S251
#
 task definition  338  13 0 0  #S252
#
 task definition  339  13 0 0  #S253
#-----------------------------------
# merchant ships (N=7)
#-----------------------------------
 task definition  340  12 0 0
#
 task definition  341  12 0 0
#
 task definition  342  12 0 0
#
 task definition  343  12 0 0
#
 task definition  344  12 0 0
#
 task definition  345  12 0 0
#
 task definition  346  12 0 0
#-----------------------------------
# possible hostile ships (N=8: 4 and 4)
#-----------------------------------
 task definition  347  19 0 0
#
 task definition  348  19 0 0
#
 task definition  349  19 0 0
#
 task definition  350  19 0 0
#
 task definition  351  20 0 0
#
 task definition  352  20 0 0
```

```
#
 task definition  353  20 0 0
#
 task definition  354  20 0 0
#----------------------------------
# SAM sites (N=16)
#----------------------------------
 task definition  355  40 0 0  #super SAM
#
 task definition  356  10 0 0
#
 task definition  357  10 0 0
#
 task definition  358  10 0 0
#
 task definition  359  10 0 0
#
 task definition  360  10 0 0
#
 task definition  361  10 0 0
#
 task definition  362  10 0 0
#
 task definition  363  10 0 0
#
 task definition  364  10 0 0
#
 task definition  365  10 0 0
#
 task definition  366  10 0 0
#
 task definition  367  40 0 0  #super SAM
#
 task definition  368  10 0 0
#
 task definition  369  10 0 0
#
 task definition  370  10 0 0
#----------------------------------
```

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```
# mine fields (N=12)
#-----------------------------------
 task definition  371  15 0 0
#
 task definition  372  15 0 0
#
 task definition  373  15 0 0
#
 task definition  374  15 0 0
#
 task definition  375  15 0 0
#
 task definition  376  15 0 0
#
 task definition  377  15 0 0
#
 task definition  378  15 0 0
#
 task definition  379  15 0 0
#
 task definition  380  15 0 0
#
 task definition  381  15 0 0
#
 task definition  382  15 0 0
#-----------------------------------
# DDG-firing exocet missiles (N=12) -- reqs 1 hit in this run
#-----------------------------------
 task definition  383  3 0 0
#task repeat 383 1
#
 task definition  384  3 0 0
#
 task definition  385  3 0 0
#task repeat 385 1
#
 task definition  386  3 0 0
#
 task definition  387  3 0 0
```

```
#task repeat 387 1
#
 task definition  388  3 0 0
#
 task definition  389  3 0 0
#task repeat 390 1
#
 task definition  390  3 0 0
#
 task definition  391  3 0 0
#task repeat 391 1
#
 task definition  392  3 0 0
#
 task definition  393  3 0 0
#
 task definition  394  3 0 0
#-----------------------------------
# search and rescue at sea (N=10)
#-----------------------------------
 task definition  395  23 0 0
#
 task definition  396  23 0 0
#
 task definition  397  23 0 0
#
 task definition  398  23 0 0
#
 task definition  399  23 0 0
#
 task definition  400  23 0 0
#
 task definition  401  23 0 0
#
 task definition  402  23 0 0
#
 task definition  403  23 0 0
#
 task definition  404  23 0 0
```

```
#------------------------------------
# red a/c attackers (N=18) - reqs 1 hit
#------------------------------------
 task definition  405  7 0 0
#task repeat 405 1
#
 task definition  406  7 0 0
#task repeat 406 1
#
 task definition  407  7 0 0
#task repeat 407 1
#
 task definition  408  7 0 0
#task repeat 408 1
#
 task definition  409  7 0 0
#task repeat 409 1
#
 task definition  410  7 0 0
#task repeat 410 1
#
 task definition  411  7 0 0
#task repeat 411 1
#
 task definition  412  7 0 0
#task repeat 412 1
#
 task definition  413  7 0 0
#task repeat 413 1
#
 task definition  414  7 0 0
#task repeat 414 1
#
 task definition  415  7 0 0
#task repeat 415 1
#
 task definition  416  7 0 0
#task repeat 416 1
#
```

```
 task definition  417  7 0 0
#task repeat 417 1
#
 task definition  418  7 0 0
#task repeat 418 1
#
 task definition  419  7 0 0
#task repeat 419 1
#
 task definition  420  7 0 0
#task repeat 420 1
#
 task definition  421  7 0 0
#task repeat 421 1
#
 task definition  422  7 0 0
#task repeat 422 1
#-----------------------------------
# commercial air (N=8)
#-----------------------------------
 task definition  423  11 0 0
#
 task definition  424  11 0 0
#
 task definition  425  11 0 0
#
 task definition  426  11 0 0
#
 task definition  427  11 0 0
#
 task definition  428  11 0 0
#
 task definition  429  11 0 0
#
 task definition  430  11 0 0
#-----------------------------------
# possible hostile aircarft (N=8: 3 and 5)
#-----------------------------------
 task definition  431  17 0 0
```

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```
#
 task definition  432  17 0 0
#
 task definition  433  17 0 0
#
 task definition  434  18 0 0
#
 task definition  435  18 0 0
#
 task definition  436  18 0 0
#
 task definition  437  18 0 0
#
 task definition  438  18 0 0
#-----------------------------------
# reconnaisance air (N=4)
#-----------------------------------
 task definition  439  24 0 0
#
 task definition  440  24 0 0
#
 task definition  441  24 0 0
#
 task definition  442  24 0 0
#-----------------------------------
# air defenders (N=2)
#-----------------------------------
 task definition  443  37 0 0
#
 task definition  444  37 0 0
#-----------------------------------
# other S&R/mayday reports (N=4)
#-----------------------------------
 task definition  445  33 0 0 #ground SAR
#
 task definition  446  27 0 0
#
 task definition  447  27 0 0
#
```

```
 task definition  448  27 0 0
#-----------------------------------
# Gunrunning patrol boats (N=2)
#-----------------------------------
 task definition  449  34 0 0
#
 task definition  450  34 0 0
#-----------------------------------
# Exocet missiles (N=10)
#-----------------------------------
 task definition  451  16 0 0
#
 task definition  452  16 0 0
#
 task definition  453  16 0 0
#
 task definition  454  16 0 0
#
 task definition  455  16 0 0
#
 task definition  456  16 0 0
#
 task definition  457  16 0 0
#
 task definition  458  16 0 0
#
 task definition  459  16 0 0
#
 task definition  460  16 0 0
#-----------------------------------
# SCUD early warnings (N=11)
#-----------------------------------
 task definition  461  22 0 0
#
 task definition  462  22 0 0
#
 task definition  463  22 0 0
#
 task definition  464  22 0 0
```

```
       #
        task definition  465  22 0 0
       #
        task definition  466  22 0 0
       #
        task definition  467  22 0 0
       #
        task definition  468  22 0 0
       #
        task definition  469  22 0 0
       #
        task definition  470  22 0 0
       #
        task definition  471  22 0 0
       #---------------------------------
       # mobile SAM sites  (N=3)
       #---------------------------------
        task definition  472  21 0 0
       #
        task definition  473  21 0 0
       #
        task definition  474  21 0 0
       #---------------------------------
       # task prerequisites id  num pr(1) pr(2) ... pr(num)
       # id:       integer number from 200 to 399, giving an unique id to the
   task.
       # num:      integer number of prerequisite tasks that this task has
       # pr(i):    the task number of a prerequisite for this class
       #           Note: prerequisites must have lower task number [i.e.
   pr(i) < id ]
       #           default=task has no prerequisites (num=0)
       #---------------------------------
        task prerequisites 203  1  200  #NBW <= CMD
        task prerequisites 209  4  203 201 207 208  #ABW <= NBW, Bridge,
   SA3, SA3
       #task prerequisites 210  1  209 #ABE <= ABW
        task prerequisites 211  2  210  206 #NBE <= ABE, mines
        task prerequisites 212  3  211  205 209 #port <= mines, NBE, ABW
       #
       #---------------------------------
```

```
#
# task spawn  id  num  type  sid(1)  ...   sid(5)
#                          sid(6)  ...   sid(10)
#                             ...    ...    ...
#                          sid(num-4) ...  sid(num)
# id:     integer id of 'spawner' task for which new tasks will be
spawned.
# num:    integer number of tasks to be spawned.
# type:   character A or D denoting a task Attack or task Disappear
event.
# sid(i): integer ids of 'spawned' tasks.
# NOTE:i)  0 < num < n, where n is specified via 'number_of'
statement.
#     ii)  a task can be both spawned and a spawner (ie, recursive),
#             however, a task cannot be spawned by more than one
spawner.
#    iii) to prevent spawning cycles, ie, X spawns Y spawns X, we
#              require id < sid(i), i = 1..num.
#     iv)  at most 5 spawned task ids specified per line, and, for
#             num > 5, only last line can have <= 5 task ids specified.
#
#--------------------
#    timing events
#--------------------
# Destroyers that  fire XOCs, next location
 task spawn  383 2 D 451 384
 task spawn  384 2 D 452 393
 task spawn  385 2 D 453 386
 task spawn  386 1 D 454
 task spawn  387 2 D 455 388
 task spawn  388 1 D 456
 task spawn  389 2 D 457 390
#task spawn  390 1 D 458
 task spawn  391 2 D 459 392
 task spawn  392 2 D 460 394
# Coastal defense missile launches
 task spawn  232 1 D 318
 task spawn  233 1 D 319
 task spawn  234 1 D 320
 task spawn  235 1 D 321
 task spawn  236 1 D 322
```

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```
task spawn   237 1 D 323
task spawn   238 1 D 324
task spawn   239 1 D 325
task spawn   240 1 D 326
task spawn   241 1 D 327
task spawn   242 1 D 328
task spawn   243 1 D 329
task spawn   244 1 D 330
task spawn   245 1 D 331
task spawn   246 1 D 332
task spawn   247 1 D 333
task spawn   248 1 D 334
task spawn   249 1 D 335
task spawn   250 1 D 336
task spawn   251 1 D 337
task spawn   252 1 D 338
task spawn   253 1 D 339
# SCUD missile launches (1st missile @+1; second setup @+60)
task spawn   262 2 D 263 290
task spawn   263 1 D     291
task spawn   264 2 D 265 292
task spawn   265 1 D     293
task spawn   266 2 D 267 294
task spawn   267 1 D     295
task spawn   268 2 D 269 296
task spawn   269 1 D     297
task spawn   270 2 D 271 298
task spawn   271 1 D     299
task spawn   272 2 D 273 300
task spawn   273 1 D     301
task spawn   274 2 D 275 302
task spawn   275 1 D     303
task spawn   276 2 D 277 304
task spawn   277 1 D     305
task spawn   278 2 D 279 306
task spawn   279 1 D     307
task spawn   280 2 D 281 308
task spawn   281 1 D     309
task spawn   282 2 D 283 310
```

```
 task spawn  283 1 D     311
 task spawn  284 2 D 285 312  # mobile
 task spawn  285 1 D     313
 task spawn  286 2 D 287 314  # mobile
 task spawn  287 1 D     315
# -------------------------
 task spawn  210 1 A 445  #SAR at ABE
 task spawn  201 1 A 446  #SAR at Bridge 1
# -------------------------
game end 212  60.0  # capturing PORT ends game
#<<<<<<<<< Maneuver Information: N6rn2 >>>>>>>>>
#
# maneuver definition id  time
#          flag(1)  x(1)  y(1)  v(1)
#          flag(2)  x(2)  y(2)  v(2)
#          ... ... ... ...
#          flag(m)  x(m)  y(m)  v(m)
# id:      integer number uniquely specifying this  task.
# time:    floating number specifying the task arrival time.
#          If this number is omitted, a randomly generated
#          arrival time will be assigned to the task.
# flag(i): one character to indicate the type of the maneuver.
# =m       ordinary maneuver
# =s       maneuver of staying at a point
# =e       ending maneuver
# v(i):    relative velocity (0<vi<=1).
# if       flagi=s, then vi is the task's staying time
#          rather than its velocity.
# x(i),y(i): coordinates, in [-0.5,1.5]*simu_scale.
# default  straight line maneuvers automatically generated,
#          starting at (simulation scale)/2 and ending
#          in the center of the screen.
#
#-------------------------------
# Tasks 200-213 (mission task graph & prerequisites)
#-------------------------------
maneuver definition   200  1.00  #command center
s  125.0  330.0  3600.
e  125.0  330.0  0.0
```

```
#

maneuver definition   211  1.00       # Naval Base East

s  200.0  200.0  3600.

e  200.0  200.0  0.0

#

maneuver definition   203  1.00       # Naval Base West

s  100.0  200.0  3600.

e  100.0  200.0  0.0

#

maneuver definition   210  1.00       # Air Base East

s   150.0  300.0  3600.

e   150.0  300.0  0.0

#

maneuver definition   209  1.00       # AirBase West

s  50.0  300.0  3600.

e  50.0  300.0  0.0

#

maneuver definition   201  1.00  #bridge1

s  80.0  245.0  3600.

e  80.0  245.0  0.0

#

maneuver definition   202  1.00  #bridge2

s  140.0  240.0  3600.

e  140.0  240.0  0.0

#

maneuver definition   206  1.00  #mines @ NBE

s  200.0  190.0  3600.

e  200.0  190.0  0.0

#

maneuver definition   204  3000.00

s  100.0  360.0  3600.

e  100.0  360.0  0.0

#

maneuver definition   205  100.00 #mines @ Tunis

s  320.0  190.0  3600.

e  320.0  190.0  0.0

#

maneuver definition   207  10.000  #SAM @ ABW

s   40.0   290.0  3000.0
```

```
e    40.0    290.0   0.0
#
maneuver definition   208  10.000  #SAM @ABW
s    60.0    290.0   3000.0
e    60.0    290.0   0.0
#
maneuver definition   212  1.00  #Tunis
s   320.0   200.0   3600.
e   320.0   200.0   0.0
#
maneuver definition   213  3000.00
s   100.0   360.0   3600.
e   100.0   360.0   0.0
#
maneuver definition   214  3000.00
s   100.0   360.0   3600.
e   100.0   360.0   0.0
#
maneuver definition   215  3000.00
s   100.0   360.0   3600.
e   100.0   360.0   0.0
#
#--------------------------------
# Tasks 216 -31 (enemy patrol boats)
##############################Patrol Boats
#--------------------------------
maneuver definition   216  380.000 # 2nd wave attacks DDGC
m   325.0    200.0   0.6
m   375.0    175.0   1.0
m   410.0    160.0   1.0
e   370.0    150.0   0.0
#
maneuver definition   217  380.000 # 2nd wave attacks DDGB
m   360.0   195.0   0.7   #out of hiding at shore
m   400.0   195.0   0.6
e   430.0   240.0   0.0
#
maneuver definition   218  380.000 # 2nd wave attacks CG
m   100.0   200.0   0.7   #out of NBE
```

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```
e   289.0   153.0   0.0
#
maneuver definition    219   380.000 # 2nd wave attacks CVN
m  200.0   200.0   1.0   #out of NBW
e  200.0   100.0   0.0
#
maneuver definition    220   380.000 # 2nd wave attacks DDGA
m  100.0   200.0   1.0   #out of NBE
e  120.0   150.0   0.0
#
maneuver definition    221   380.000 # 2nd wave attacks FFG
m  425.0   450.0   1.0   #out of Libya
m  440.0   420.0   1.0
e  440.0   380.0   0.0
#
maneuver definition    222  1300.000  # 4th wave attacks CG
s   230.0    190.0   9.0
m   230.0    190.0   0.8
e   280.0    150.0   0.0
#
maneuver definition    223  1200.000 # 4th wave attacks CVN
m    90.0   160.0   1.0
m    60.0   123.0   1.0
m   160.0   123.0   0.8
e   200.0   100.0   0.0
#
maneuver definition    224  1200.000 # 4th wave attacks DDGA
m  100.0   200.0   0.7   #out of NBE
m  160.0   150.0   1.0
e  120.0   150.0   0.0
#
maneuver definition    225  1300.000 #  4th wave attacks CVN
m  320.0   200.0   1.0   #out of Tunis
m  220.0   180.0   1.0
e  200.0   100.0   0.0
#
maneuver definition    226   360.000 # 2nd wave attacks CVN
m  200.0   200.0   0.8   #out of NBW
m  240.0   120.0   1.0
```

```
e   200.0   100.0   0.0
#
maneuver definition   227   240.000 # game start attacks CG
m   200.0   200.0   0.7   #out of NBW
m   240.0   125.0   1.0
e   280.0   150.0   0.0
#
maneuver definition   228   240.000 # game start attacks DDGA
m   100.0   200.0   0.7   #out of NBE
m   160.0   150.0   1.0
e   120.0   150.0   0.0
#
maneuver definition   229   700.000 # 3rd wave attacks CG
m   230.0   200.0   0.7   #out of hiding at shore
m   300.0   170.0   1.0
e   280.0   150.0   0.0
#
maneuver definition   230   1200.000 # 4th wave attacks DDGB
m   360.0   195.0   0.7   #out of hiding at shore
m   400.0   195.0   0.6
e   430.0   240.0   0.0
#
maneuver definition   231   1200.00  # 4th wave attacks FFG
m   425.0   450.0   1.0   #out of Libya
e   440.0   380.0   0.0
#
#-------------------------------
# Tasks 232-253 (CD/silkworm launchers)
###############################Coastal Defense Launchers
#-------------------------------
maneuver definition   232   300.00  # 2nd wave target DDGA
s   80.0    205.0   70.0
e   80.0    205.0    0.0
#
maneuver definition   233   260.00  # 1ts wave target DDGA
s   90.0    205.0   70.0
e   90.0    205.0    0.0
#
maneuver definition   234   800.00  # 3rd wave target DDGA
```

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```
s  110.0    205.0   70.0
e  110.0    205.0    0.0
#
maneuver definition   235  1500.00  # 5th wave target DDGA
s  120.0    205.0   70.0
e  120.0    205.0    0.0
#
maneuver definition   236  300.00  # 2nd wave target CVN
s  180.0    205.0   70.0
e  180.0    205.0    0.0
#
maneuver definition   237  1510.00  # 5th wave target CVN
s  190.0    205.0   70.0
e  190.0    205.0    0.0
#
maneuver definition   238  1400.00  # 4th wave target CVN
s  210.0    205.0   70.0
e  210.0    205.0    0.0
#
maneuver definition   239  240.00  # 1st wave target CVN
s  220.0    205.0   70.0
e  220.0    205.0    0.0
#
maneuver definition   240  300.00  # 2nd wave target CG
s  290.0    205.0   70.0
e  290.0    205.0    0.0
#
maneuver definition   241  800.00  # 3rd wave target CG
s  270.0    205.0   70.0
e  270.0    205.0    0.0
#
maneuver definition   242  1400.00  # 4th wave target CG
s  280.0    205.0   70.0
e  280.0    205.0    0.0
#
maneuver definition   243  1700.00  # target CG
s  280.0    200.0   70.0
e  280.0    200.0    0.0
#
```

```
maneuver definition   244  300.00  # 2nd wave target DDGB
s  370.0    210.0   70.0
e  370.0    210.0    0.0
#
maneuver definition   245  1700.00  # target DDGB
s  370.0    230.0   70.0
e  370.0    230.0    0.0
#
maneuver definition   246  1800.00  # target DDGB
s  368.0    250.0   70.0
e  368.0    250.0    0.0
#
maneuver definition   247  2000.00  # target DDGB
s  370.0    270.0   70.0
e  370.0    270.0    0.0
#
maneuver definition   248  300.00  # 2nd wave target FFG
s  370.0    350.0   70.0
e  370.0    350.0    0.0
#
maneuver definition   249  800.00  # 3rd wave target FFG
s  370.0    370.0   70.0
e  370.0    370.0    0.0
#
maneuver definition   250  100.00  # 3rd wave target FFG
s  370.0    390.0   70.0
e  370.0    390.0    0.0
#
maneuver definition   251  1700.00  # target FFG
s  370.0    410.0   70.0
e  370.0    410.0    0.0
#
maneuver definition   252  300.00  # 2nd wave target DDGC
s  320.0    205.0   70.0
e  320.0    205.0    0.0
#
maneuver definition   253  1700.00  # target DDGC
s  325.0    205.0   70.0
e  325.0    205.0    0.0
```

```
#
#-------------------------------
# Tasks 254-257 (Ground force units)
#-------------------------------
maneuver definition   254  10.00  # RGF @ bridge1
s  83.0  241.0  3000.0
e  83.0  241.0  0.0
#
maneuver definition   255  10.00  # RGF @ ABE
s  148.0  305.0  3000.0
e  148.0  305.0  0.0
#
maneuver definition   256  10.00  # RGF @ NBE
s  200.0  205.0  3000.0
e  200.0  205.0  0.0
#
maneuver definition   257  10.00  # RGF 4
s  320.0  320.0  3000.0
e  320.0  320.0  0.0
#
#-------------------------------
# Tasks 258-59 (Complex Sea Tasks)
##################Complex Sea#################
#-------------------------------
maneuver definition   258  1200.00
s  400.0  300.0  500.0
e  400.0  300.0  0.0
#
maneuver definition   259  800.00
s  160.0  120.0  500.0
e  160.0  120.0  0.0
#
#-------------------------------
# Tasks 260-261 (Complex Sea Tasks)
##################Complex Sea#################
#-------------------------------
maneuver definition   260  1500.00
s  325.0  125.0  500.0
e  325.0  125.0  0.0
#
```

```
        maneuver definition   261  5000.00

        s   250.0   300.0   500.0

        e   250.0   300.0   0.0

        #

        #--------------------------------

        # Tasks 262-89 (SCUD missile launchers)
###############Scud Launchers

        #--------------------------------

        maneuver definition   262  1200.000

        s    40.0    260.0   113.0

        e    40.0    260.0   0.0

        #

        maneuver definition   263   2.000 # second launch

        s    40.0    260.0   175.0

        e    40.0    260.0   0.0

        #

        maneuver definition   264   800.000

        s   100.0    260.0   110.0

        e   100.0    260.0   0.0

        #

        maneuver definition   265   2.000 # second launch

        s   100.0    260.0   164.0

        e   100.0    260.0   0.0

        #

        maneuver definition   266  1500.000

        s   200.0    260.0   101.0

        e   200.0    260.0   0.0

        #

        maneuver definition   267   2.000 # second launch

        s   200.0    260.0   178.0

        e   200.0    260.0   0.0

        #

        maneuver definition   268  1500.000 # colocated with Super SAM

        s   100.0    302.0   116.0

        e   100.0    302.0    0.0

        #

        maneuver definition   269   2.000 # second launch

        s   100.0    300.0   170.0

        e   100.0    300.0    0.0
```

```
#
maneuver definition   270  1200.000
s  200.0    300.0   97.0
e  200.0    300.0    0.0
#
maneuver definition   271  2.000 # second launch
s  200.0    300.0  160.0
e  200.0    300.0    0.0
#
maneuver definition   272  600.000 # 3rd wave at Country A
s  80.0    360.0  120.0
e  80.0    360.0    0.0
#
maneuver definition   273  2.000 # second launch
s  80.0    360.0  180.0
e  80.0    360.0    0.0
#
maneuver definition   274  580.000 # 3rd wave at Country B
s  200.0    360.0  116.0
e  200.0    360.0    0.0
#
maneuver definition   275  2.000 # second launch
s  200.0    360.0  188.0
e  200.0    360.0    0.0
#
maneuver definition   276  1800.000
s  140.0    410.0  127.0
e  140.0    410.0    0.0
#
maneuver definition   277  2.000 # second launch
s  140.0    410.0  180.0
e  140.0    410.0    0.0
#
maneuver definition   278  1900.000
s  200.0    400.0  96.0
e  200.0    400.0    0.0
#
maneuver definition   279  2.000  # second launch
s  200.0    400.0  160.0
```

```
e   200.0    400.0    0.0
#
maneuver definition    280   850.000
s   290.0    320.0   112.0
e   290.0    320.0    0.0
#
maneuver definition    281   2.000 # second launch
s   290.0    320.0   160.0
e   290.0    320.0    0.0
#
maneuver definition    282   1500.000 # colocated with the Super SAM
s   290.0   380.0    93.0
e   290.0   380.0     0.0
#
maneuver definition    283   2.000 # second launch
s   290.0   380.0    158.0
e   290.0   380.0      0.0
#
maneuver definition    284   5000.000 # mobile launcher
s   290.0   440.0   110.0
e   290.0   440.0    0.0
#
maneuver definition    285   2.000  # next position of 284 (333s later)
s   290.0   440.0   1.0
m   290.0   440.0   .95
e   340.0   300.0    0.0
#
maneuver definition    286   5000.000 # mobile launcher
s   200.0   240.0   112.0
e   200.0   240.0    0.0
#
maneuver definition    287   2.000  # next position of 286 (333s later)
m   200.0   240.0   0.99
s   200.0   260.0   98.0
e   200.0   260.0    0.0
#
maneuver definition    288   5000.000
s   245.0    300.0   110.0
e   245.0    300.0    0.0
```

205

```
#

maneuver definition   289  5000.000

s  240.0    300.0   110.0

e  240.0    300.0     0.0

#

#-------------------------------

# Tasks 290-317 (SCUD missiles spawned by launchers)
##############Scud Missiles

#-------------------------------

maneuver definition   290  1.000 # spawned by 262

s   40.0    260.0   3.0

m   40.0    260.0   1.0

e  275.0     80.0   0.0

#

maneuver definition   291  1.000 # spawned by 263

s   40.0    260.0   3.0

m   40.0    260.0   1.0

e  275.0     80.0   0.0

#

maneuver definition   292  1.000 # spawned by 264

s  100.0    260.0  3.0

m  100.0    260.0  1.0

e  280.0     20.0   0.0

#

maneuver definition   293  1.000 # spawned by 265

s  100.0    260.0  3.0

m  100.0    260.0  1.0

e  280.0     20.0   0.0

#

maneuver definition   294  1.000 # spawned by 266

s  200.0    260.0   3.0

m  200.0    260.0   1.0

e  318.0     90.0   0.0

#

maneuver definition   295  1.000 # spawned by 267

s  200.0    260.0   3.0

m  200.0    260.0   1.0

e  318.0     90.0   0.0

#
```

206

```
maneuver definition    296  1.000 # spawned by 268
s   100.0    300.0   3.0
m   100.0    300.0   1.0
e   280.0     40.0   0.0
#
maneuver definition    297  1.000 # spawned by 269
s   100.0    300.0   3.0
m   100.0    300.0   1.0
e   280.0     40.0   0.0
#
maneuver definition    298  1.000 # spawned by 270
s   200.0    300.0   3.0
m   200.0    300.0   1.0
e   440.0    180.0   0.0
#
maneuver definition    299  1.000 # spawned by 271
s   200.0    300.0   3.0
m   200.0    300.0   1.0
e   440.0    180.0   0.0
#
maneuver definition    300  1.000 # spawned by 272
s    80.0    360.0   3.0
m    80.0    360.0   1.0
e   280.0      0.0   0.0
#
maneuver definition    301  1.000 # spawned by 273
s    80.0    360.0   3.0
m    80.0    360.0   1.0
e   280.0      0.0   0.0
#
maneuver definition    302  1.000 # spawned by 274
s   200.0    360.0   3.0
m   200.0    360.0   1.0
e   480.0    175.0   0.0
#
maneuver definition    303  1.000 # spawned by 275
s   200.0    360.0   3.0
m   200.0    360.0   1.0
e   480.0    175.0   0.0
```

```
#
maneuver definition   304  1.000 # spawned by 276
s  140.0    410.0  3.0
m  140.0    410.0  1.0
e  310.0     60.0  0.0
#
maneuver definition   305  1.000 # spawned by 277
s  140.0    410.0  3.0
m  140.0    410.0  1.0
e  310.0     60.0  0.0
#
maneuver definition   306  1.000 # spawned by 278
s  200.0    400.0  3.0
m  200.0    400.0  1.0
e  480.0    190.0  0.0
#
maneuver definition   307  1.000 # spawned by 279
s  200.0    400.0  3.0
m  200.0    400.0  1.0
e  480.0    190.0  0.0
#
maneuver definition   308  1.000 # spawned by 280
s  290.0    320.0  3.0
m  290.0    320.0  1.0
e  440.0    160.0  0.0
#
maneuver definition   309  1.000 # spawned by 281
s  290.0    320.0  3.0
m  290.0    320.0  1.0
e  440.0    160.0  0.0
#
maneuver definition   310  1.000 # spawned by 282
s  290.0    380.0  3.0
m  290.0    380.0  1.0
e  425.0    160.0  0.0
#
maneuver definition   311  1.000 # spawned by 283
s  290.0    380.0  3.0
m  290.0    380.0  1.0
```

```
e  425.0   160.0  0.0

#

maneuver definition   312  1.000 # spawned by 284 (mobile)

s  360.0   300.0  3.0

m  360.0   300.0  1.0

e  460.0   200.0  0.0

#

maneuver definition   313  1.000 # spawned by 285 (mobile)

s  340.0   300.0  3.0

m  340.0   300.0  1.0

e  460.0   200.0  0.0

#

maneuver definition   314  1.000 # spawned by 286 (mobile)

s  200.0   240.0   3.0

m  200.0   240.0   1.0

e  300.0    80.0   0.0

#

maneuver definition   315  1.000 # spawned by 287 (mobile)

s  200.0   260.0   3.0

m  200.0   260.0   1.0

e  300.0    80.0   0.0

#

maneuver definition   316  5000.000 # spawned by 288

s  245.0   300.0  3.0

m  245.0   300.0  1.0

e  320.0   200.0  0.0

#

maneuver definition   317  5000.000 # spawned by 289

s  240.0   300.0  3.0

m  240.0   300.0  1.0

e  320.0   200.0  0.0

#

#--------------------------------

# Tasks 318-339 (CD missiles spawned by launchers)
###########CD Missiles

#--------------------------------

maneuver definition   318  1.000 # Spawned by 232 target DDGA

m  80.0   205.0  1.0

e  120.0  150.0  0.0
```

```
#
maneuver definition   319  1.000 # Spawned by 233 target DDGA
m  90.0   205.0  1.0
e  120.0  150.0  0.0
#
maneuver definition   320  1.000 # Spawned by 234 target DDGA
m  110.0  205.0  1.0
e  120.0  150.0  0.0
#
maneuver definition   321  1.000 # Spawned by 235 target DDGA
m  120.0  205.0  1.0
e  120.0  150.0  0.0
#
maneuver definition   322  1.000 # Spawned by 236 target CVN
m  180.0  205.0  1.0
e  200.0  100.0  0.0
#
maneuver definition   323  1.000 # Spawned by 237 target CVN
m  190.0  205.0  1.0
e  200.0  100.0  0.0
#
maneuver definition   324  1.000 # Spawned by 238 target CVN
m  210.0  205.0  1.0
e  200.0  100.0  0.0
#
maneuver definition   325  1.000 # Spawned by 239 target CVN
m  220.0  205.0  1.0
e  200.0  100.0  0.0
#
maneuver definition   326  1.000 # Spawned by 240 target CG
m  290.0  205.0  1.0
e  280.0  150.0  0.0
#
maneuver definition   327  1.000 # Spawned by 241 target CG
m  270.0  205.0  1.0
e  280.0  150.0  0.0
#
maneuver definition   328  1.000 # Spawned by 242 target CG
m  280.0  205.0  1.0
```

```
e  280.0  150.0  0.0
#
maneuver definition   329  1.000 # Spawned by 243 target CG
m  280.0  200.0  1.0
e  280.0  150.0  0.0
#
maneuver definition   330  1.000 # Spawned by 244 target DDGB
m  370.0  210.0  1.0
e  430.0  240.0  0.0
#
maneuver definition   331  1.000 # Spawned by 245 target DDGB
m  370.0  230.0  1.0
e  430.0  240.0  0.0
#
maneuver definition   332  1.000 # Spawned by 246 target DDGB
m  368.0  250.0  1.0
e  430.0  240.0  0.0
#
maneuver definition   333  1.000 # Spawned by 247 target DDGB
m  370.0  270.0  1.0
e  430.0  240.0  0.0
#
maneuver definition   334  1.000 # Spawned by 248 target FFG
m  370.0  350.0  1.0
e  440.0  380.0  0.0
#
maneuver definition   335  1.000 # Spawned by 249 target FFG
m  370.0  370.0  1.0
e  440.0  380.0  0.0
#
maneuver definition   336  1.000 # Spawned by 250 target FFG
m  370.0  390.0  1.0
e  440.0  380.0  0.0
#
maneuver definition   337  1.000 # Spawned by 251 target FFG
m  370.0  410.0  1.0
e  440.0  380.0  0.0
#
maneuver definition   338  1.000 # Spawned by 252 target DDGC
```

```
m  320.0   200.0  1.0

e  370.0   150.0  0.0

#

maneuver definition   339  1.000 # Spawned by 253 target DDGC

m  325.0   200.0  1.0

e  370.0   150.0  0.0

#

#-------------------------------

# Tasks 340-346  (merchant shipping)
##########Merchant Ships

#-------------------------------

maneuver definition   340  1200.00

s    240.0    100.0  5.0

m    240.0    100.0  0.99

e    240.0    200.0  0.0

#

maneuver definition   341  300.00

s    340.0    100.0  5.0

m    340.0    100.0  0.99

e    340.0    200.0  0.0

#

maneuver definition   342  300.00

m    340.0   127.0  0.99

m    375.0   127.0  0.99

e    500.0    50.0  0.0

#

maneuver definition   343  800.00

m      5.0   127.0  0.99

e    375.0   127.0  0.0

#

maneuver definition   344  800.00

m  500.0    424.0  0.99

s  424.0    450.0  1.0

m  424.0    450.0  0.99

m  424.0    300.0  0.99

e  375.0   124.0  0.0

#

maneuver definition   345  500.00

m  500.0    50.0  0.99
```

```
    m   373.0   122.0   0.99

    m   423.0   300.0   0.99

    e   425.0   450.0   0.0

    #

    maneuver definition   346   300.00

    s   426.0    450.0   1.0

    m   426.0    450.0   0.99

    m   426.0    300.0   0.99

    e   375.0    125.0   0.0

    #

    #-------------------------------

    # Tasks 347-354 (possible hostile ships)
##########Possible Hostile Ships

    #-------------------------------

    maneuver definition   347   380.00   # 2nd wave hostile to FFG

    m   424.0    430.0   0.5

    m   424.0    400.0   0.99

    e   420.0    380.0   0.0

    #

    maneuver definition   348   1050.00 # 4th wave hostile to CG

    m   200.0    200.0   0.5

    m   270.0    126.0   0.5

    m   300.0    126.0   0.99

    e   280.0    150.0   0.0

    #

    maneuver definition   349   1700.00 # hostile to DDGA

    m   100.0    200.0   0.5

    m    90.0    150.0   0.99

    e   120.0    150.0   0.0

    #

    maneuver definition   350   2000.00  # hostile to CVN

    m   320.0    200.0   0.5

    m   220.0    145.0   0.99

    e   200.0    100.0   0.0

    #

    maneuver definition   351   1100.00  # 4th wave not hostile to FFG

    m   425.0    440.0   0.99

    m   440.0    400.0   0.99

    m   475.0    400.0   0.5
```

```
e  425.0    440.0  0.0
#
maneuver definition   352  1100.00  # 4th wave not hostile DDGB
m  428.0    420.0  0.99
m  423.0    300.0  0.99
m  375.0    125.0  0.99
e  500.0     55.0   0.0
#
maneuver definition   353  1700.00  # not hostile DDGB
m  485.0    430.0   0.99
m  440.0    235.0   0.99
e  485.0    430.0   0.0
#
maneuver definition   354  1100.00  # 4th wave not hostile DDGA
m   75.0     75.0   0.99
m  125.0    100.0   0.99
m  175.0    100.0   1.0
e  275.0    130.0   0.0
#
#-------------------------------
# Tasks 355-70 (SAM sites)
##########SAM Sites
#-------------------------------
maneuver definition   355  1300.000  #super SAM colocated with SML
268/9
s  100.0    300.0  3000.0
e  100.0    300.0  0.0
#
maneuver definition   356  5000.000
s   20.0    260.0  3000.0
e   20.0    260.0  0.0
#
maneuver definition   357  18.000
s  100.0    260.0  3000.0
e  100.0    260.0  0.0
#
maneuver definition   358  18.000
s  180.0    260.0  3000.0
e  180.0    260.0  0.0
#
```

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```
maneuver definition   359  18.000
s  220.0   260.0  3000.0
e  220.0   260.0  0.0
#
maneuver definition   360  5000.000
s  100.0   310.0  3000.0
e  100.0   310.0  0.0
#
maneuver definition   361  18.000
s   180.0   340.0  3000.0
e   180.0   340.0  0.0
#
maneuver definition   362  18.000
s   40.0   360.0  3000.0
e   40.0   360.0  0.0
#
maneuver definition   363  18.000
s  120.0   380.0  3000.0
e  120.0   380.0  0.0
#
maneuver definition   364  18.000
s  240.0   380.0  3000.0
e  240.0   380.0  0.0
#
maneuver definition   365  18.000
s  320.0   240.0  3000.0
e  320.0   240.0  0.0
#
maneuver definition   366  5000.000
s  290.0   280.0  3000.0
e  290.0   280.0  0.0
#
maneuver definition   367  1300.000   #super SAM colocated with SML
282/3
s  280.0   260.0  3000.0
e  280.0   260.0    0.0
#
maneuver definition   368  18.000
s  290.0   340.0  3000.0
```

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```
e  290.0    340.0     0.0

#

maneuver definition   369  18.000

s  340.0    300.0  3000.0

e  340.0    300.0     0.0

#

maneuver definition   370  18.000

s  340.0    420.0  3000.0

e  340.0    420.0     0.0

#

#-------------------------------

# Tasks 371-382 (Sea Mines)
##############Sea Mines

#-------------------------------

maneuver definition   371  5000.00

s  80.0  180.0  3000.0

e  80.0  180.0  0.0

#

maneuver definition   372  1800.00

s  120.0  180.0  3000.0

e  120.0  180.0  0.0

#

maneuver definition   373  100.00  #at NBE

s  180.0  180.0  3000.0

e  180.0  180.0  0.0

#

maneuver definition   374  100.00  #at NBE

s  220.0  180.0  3000.0

e  220.0  180.0  0.0

#

maneuver definition   375  1200.00

s  320.0  180.0   3000.0

e  320.0  180.0    0.0

#

maneuver definition   376  1500.00

s  150.0  120.0  3000.0

e  150.0  120.0  0.0

#

maneuver definition    377  500.00 # 3rd wave, drifts towards CVN
```

```
m  240.0  120.0  1.0

e  200.0  100.0  0.0

#

maneuver definition   378  500.00 # 3rd wave, drifts towards FFG

m  425.0  450.0  1.0

e  440.0  380.0  0.0

#

maneuver definition   379  500.00 # 3rd wave, drifts towards DDGA

m   60.0  120.0   1.0

e  120.0  150.0   0.0

#

maneuver definition   380  500.00 # 3rd wave, drifts towards DDGB

m  390.0  240.0  1.0

e  430.0  240.0  0.0

#

maneuver definition   381  5000.00

s  390.0  300.0  3000.0

e  390.0  300.0  0.0

#

maneuver definition   382  5000.00

s  390.0  400.0  3000.0

e  390.0  400.0  0.0

#

#-------------------------------

# Tasks 383-394 (Destroyer paths)

##########Destroyer Maneuvers

#-------------------------------

maneuver definition   383  200.00 #attack DDGA

m   60.0  180.0  0.99

e  137.0  167.0  0.0  #fire XOC451, spawn 384

#

maneuver definition   384  220.00 #attack CVN

m  137.0  167.0  0.99

e  180.0  115.0  0.0  #fire XOC452, spawn 393

#

maneuver definition   385  5000.00 #attack DDGB

m  380.0  130.0  0.7

e  410.0  226.0  0.0  #fire XOC453, spawn 386

#
```

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```
maneuver definition    386  240.00 #attack DDGB
m  410.0  226.0  0.99
m  395.0  240.0  0.99
e  410.0  254.0  0.0  #fire XOC454
#
maneuver definition    387  5000.00 #attack CG
m  200.0  200.0  0.71
m  240.0  126.0  0.70
e  280.0  126.0  0.0  #fire XOC455, spawn 388
#
maneuver definition    388  260.00  #attack CVN
m  280.0  126.0  0.99
e  200.0  124.0  0.0  #fire XOC456
#
maneuver definition    389  1750.00 #attack FFG
m  425.0  450.0  0.75
e  425.0  400.0  0.0  #fire XOC457, spawn 390
#
maneuver definition    390  240.00  #runs away
m  425.0  400.0  0.99
e  425.0  450.0  0.0
#
maneuver definition    391  350.00  #attack CVN
m  200.0  200.0  0.71
m  240.0  124.0  0.70
e  200.0  124.0  0.0  #fire XOC459, spawn 392
#
maneuver definition    392  220.00  #attack CG
m  200.0  124.0  0.99
e  280.0  126.0  0.0  #fire XOC460, spawn 394
#
maneuver definition    393  300.00
m  180.0  115.0  0.95
e  200.0  200.0  0.0
#
maneuver definition    394  320.00
m  280.0  126.0  0.95
e  320.0  200.0  0.0
#
```

```
#--------------------------------
# Tasks 395-404 (Sea REScues -- Tavail ~ 550 sec)
###########SAR
#--------------------------------
maneuver definition   395  560.000  #3rd wave, MOB for DDGB

s  440.0   280.0  260.0

e  460.0   240.0  0.0

#

maneuver definition   396  620.00  #3rd wave, SAR IN CVN AREA

s  200.0   120.0  560.0

e  200.0   120.0   0.0

#

maneuver definition   397  5000.00  #SOF pickup

s  380.0   340.0  540.0

e  380.0   340.0   0.0

#

maneuver definition   398  1200.000 #SOF pickup

s  220.0   195.0  580.0

e  220.0   195.0   0.0

#

maneuver definition   399  2000.000 #SOF pickup

s  110.0   195.0  550.0

e  110.0   195.0   0.0

#

maneuver definition   400  680.00 #3rd wave, MOB at CG

s  260.0   150.0  530.0

e  260.0   150.0   0.0

#

maneuver definition   401  1700.00 #SOF pickup

s  380.0   195.0  590.0

e  380.0   195.0  0.0

#

maneuver definition   402  740.00 #3rd wave, sea lane

s  400.0   180.0  510.0

e  400.0   180.0   0.0

#

maneuver definition   403  2000.000 #sea lane

s  420.0   400.0  500.0

e  420.0   400.0   0.0
```

```
#

maneuver definition   404  1500.00 #plane guard

s  190.0   105.0   570.0

e  190.0   105.0    0.0

#

#-------------------------------

# Tasks 405-422 (enemy aircraft attackers)
##########Enemy AC

#-------------------------------

maneuver definition   405  205.00 # 1st wave attacks DDGA

m   50.0   300.0  1.0

m   50.0   200.0  1.0

e  120.0   150.0  0.0

#

maneuver definition   406  205.00 # 1st wave attacks CVN

m  150.0   300.0  1.0

e  200.0   100.0  0.0

#

maneuver definition   407  205.00 # 1st wave attacks CG

m  150.0   300.0  1.0

e  280.0   150.0  0.0

#

maneuver definition   408  210.00  # 1st wave attacks DDGC

m  500.0     0.0  1.0

m  480.0   100.0  1.0

e  370.0   150.0  0.0

#

maneuver definition   409  205.00 # 1st wave attacks DDGB

m  300.0   480.0  1.0

e  430.0   240.0  0.0

#

maneuver definition   410  205.00  # 1st wave attacks FFG

m  300.0   480.0  1.0

m  380.0   400.0  1.0

e  440.0   380.0  0.0

#

maneuver definition   411  1200.00  # 4th wave attacks CVN

m  260.0   260.0  1.0

e  200.0   100.0  0.0
```

```
#
maneuver definition   412  1202.00  # 4th wave attacks DDGA
m  260.0    260.0  1.0
e  120.0    150.0  0.0
#
maneuver definition   413  1207.00  # 4th wave attacks CG
m  260.0    260.0  1.0
e  280.0    150.0  0.0
#
maneuver definition   414  1210.00  # 4th wave attacks DDGB
m  260.0    260.0  1.0
e  430.0    240.0  0.0
#
maneuver definition   415  1205.00  # 4th wave attacks CVN
m  260.0    260.0  1.0
e  200.0    100.0  0.0
#
maneuver definition   416  1200.00  # 4th wave attacks DDGC
m  260.0    260.0  1.0
e  370.0    150.0  0.0
#
maneuver definition   417  1300.00  # attacks DDGB
m  150.0  300.0  0.8
m  300.0  320.0  0.9
m  425.0  300.0  0.9
e  430.0  240.0  0.0
#
maneuver definition   418  1200.00  # 4th wave attacks FFG
m  150.0  300.0  0.9
e  440.0  380.0  0.0
#
maneuver definition   419  1300.00 # 4th wave attacks FFG
m  150.0  300.0  0.9
e  440.0  380.0  0.0
#
maneuver definition   420  5000.00  # attacks CVN
m  150.0   300.0  0.6
m  200.0   200.0  0.7
e  200.0   100.0  0.0
```

221

```
#

maneuver definition   421  1800.00  # attacks CVN

m  150.0    300.0   0.6

m  170.0    200.0   0.7

e  200.0    100.0   0.0

#

maneuver definition   422  1800.00 # attacks DDGA

m  150.0   300.0   0.6

m  180.0   200.0   0.7

m  100.0   180.0   0.7

e  120.0   150.0   0.0

#

#-------------------------------

# Tasks 423-430 (commercial air)
###########Comm Air

#-------------------------------

maneuver definition   423  10.00

m    5.0   205.0   0.9

s  150.0    50.0  10.0

m  150.0    50.0   0.9

e  160.0     0.0   0.0

#

maneuver definition   424  100.00

m  320.0    200.0   0.9

m  150.0     50.0   0.9

e  100.0      0.0   0.0

#

maneuver definition   425  500.00

m  315.0    95.0   0.7

e  320.0   200.0   0.0

#

maneuver definition   426  900.00

m  415.0   455.0   0.8

e  430.0   200.0   0.0

#

maneuver definition   427  1500.00

m  500.0   380.0   0.9

e  315.0    95.0   0.0

#

                     222
```

```
maneuver definition   428  1500.00

m  315.0   95.0  0.8

e  100.0  200.0  0.0

#

maneuver definition   429  1200.00

m  370.0  460.0   0.9

e  500.0  275.0   0.0

#

maneuver definition   430  1800.00

m  100.0  200.0   0.99

m  150.0   50.0   0.99

e  160.0    0.0   0.0

#

#------------------------------

# Tasks 431-438 (possible hostile aircraft)         #########Poss
Hostile AC

#------------------------------

maneuver definition   431  800.00  # 3rd wave hostile to CG

m  500.0  500.0  0.7

m  380.0  120.0  0.8

e  280.0  150.0  0.0

#

maneuver definition   432  800.00  # hostile to DDGA

m  500.0  500.0  0.7

s  315.0   95.0  15.0

m  315.0   95.0  0.7

e  120.0  150.0  0.0

#

maneuver definition   433  800.00  # hostile

m  300.0  400.0  0.8

m  420.0  220.0  0.7

e  430.0  240.0  0.0

#

maneuver definition   434  800.00 # 3rd wave, not hostile to DDGA

m   20.0  260.0  1.0

m   40.0  160.0  1.0

m  100.0  150.0  0.8

e   50.0   30.0  0.0

#
```

223

```
maneuver definition   435  800.00 # 3rd wave, not hostile to CVN

m   60.0    20.0  0.7

m  200.0    80.0  0.7

e  280.0    80.0  0.0

#

maneuver definition   436  2100.00

m  300.0   400.0  0.7

s  420.0   220.0  15.0

m  420.0   220.0  0.7

m  315.0    95.0  0.7

e  300.0   400.0  0.0

#

maneuver definition   437  1700.00

m  500.0   500.0  0.7

s  315.0    95.0  15.0

m  315.0    95.0  0.7

m    5.0   100.0  0.9

e  500.0   500.0  0.0

#

maneuver definition   438  800.00 # 3rd wave, not hostile to FFG

m  300.0   400.0  0.8

m  430.0   380.0  0.7

e  430.0   200.0  0.0

#

#--------------------------------

# Tasks 439-442 (recon aircraft)            ##########Recon AC

#--------------------------------

maneuver definition   439  1.00

m   50.0   300.0  0.5

m  200.0   170.0  0.5

s  320.0   180.0  10.0

m  320.0   180.0  0.7

e   50.0   300.0  0.0

#

maneuver definition   440  1200.00

m   50.0   300.0  0.5

m   60.0   180.0  0.5

s  200.0   180.0  10.0

m  200.0   180.0  0.7
```

224

```
e    50.0   300.0   0.0
#
maneuver definition   441  1.00
m   150.0   300.0   0.5
m   380.0   200.0   0.5
s   380.0   400.0   10.0
m   380.0   400.0   0.7
e   150.0   300.0   0.0
#
maneuver definition   442  1200.00
m   150.0   300.0   0.5
m   420.0   100.0   0.5
s   460.0   160.0   10.0
m   460.0   160.0   0.7
e   150.0   300.0   0.0
#
#--------------------------------
# Tasks 443-444 (air_defenders/CAP)            ###########Enemy CAP
#--------------------------------
maneuver definition   443  40.00 #at ABW
s   50.0    290.0   2400.
e   50.0    290.0    0.0
#
maneuver definition   444  5000.00 #not used
m   28.5    66.0    0.99
e   62.0    75.0    0.0
#
#--------------------------------
# Tasks 445-448 (other SAR incl false reports)
#--------------------------------
maneuver definition   445  3.000 #SAR at ABE
s   155.0   295.0  590.0
e   155.0   295.0    0.0
#
maneuver definition   446  3.000 #SAR at Bridge
s   80.0    245.0  590.0
e   80.0    245.0    0.0
#
maneuver definition   447  2000.000
```

```
s  430.0   320.0  295.0

e  430.0   320.0   0.0

#

maneuver definition   448  5000.000

s  380.0   260.0  290.0

e  380.0   260.0   0.0

#

#-------------------------------

# Tasks 449-450 (patrol boats) - gunrunners

#-------------------------------

maneuver definition   449  1100.00   #gunrunner

m  320.0  100.0  1.0

e  320.0  200.0  0.0

#

maneuver definition   450  1200.00   #gunrunner

m  260.0  100.0  1.0

m  260.0  190.0  1.0

e  320.0  200.0  0.0

#

#-------------------------------

# Tasks 451-460 (Exocet missiles)
#########################Destroyer Missiles

#-------------------------------

maneuver definition   451  1.00   #target DDGA by 383

m  137.0  167.0  0.99

e  120.0  150.0  0.0

#

maneuver definition   452  1.00   #target CVN by 384

m  180.0  115.0  0.99

e  200.0  100.0  0.0

#

maneuver definition   453  1.00   #target DDGB by 385

m  410.0  226.0  0.99

e  430.0  240.0  0.0

#

maneuver definition   454  1.00   #target DDGB by 386

m  410.0  254.0  0.99

e  430.0  240.0  0.0

#
```

```
maneuver definition    455  1.00  #target CG by 387

m  280.0  126.0  0.99

e  280.0  150.0   0.0

#

maneuver definition    456  1.00  #target CVN by 388

m  200.0  124.0  0.99

e  200.0  100.0  0.0

#

maneuver definition    457  1.00  #target FFG by 389

m  425.0  400.0  0.99

e  440.0  380.0  0.0

#

maneuver definition    458  5000.00  #not used

m  200.0  110.0  0.99

e  200.0  100.0  0.0

#

maneuver definition    459  1.00  #target CVN by 391

m  200.0  124.0  0.99

e  200.0  100.0  0.0

#

maneuver definition    460  1.00  #target CG by 392

m  280.0  126.0  0.99

e  280.0  150.0  0.0

#-------------------------------------------

# tasks 461-471 intel on fixed SCUD launchers

##############EW INTEL on SCUDs

#-------------------------------------------

maneuver definition    461  1100.00 #ew262 at 40,260

s   50.0    255.0  200.0

e   50.0    255.0  0.0

#

maneuver definition    462  700.00 #ew264 at 100,260

s  120.0    270.0  200.0

e  120.0    270.0  0.0

#

maneuver definition    463  1400.00 #ew266 at 200,260

s  210.0    250.0  100.0

e  210.0    250.0  0.0

#
```

227

```
maneuver definition   464  1300.00 #ew268 at 100,302

# colocated with super SAM

s   110.0   310.0   30.0

e   110.0   310.0    0.0

#

maneuver definition   465  1100.00 #ew270 at 200,300

s   210.0   310.0  200.0

e   210.0   310.0    0.0

#

maneuver definition   466   500.00 #ew272 at 80,360

s   75.0    365.0  200.0

e   75.0    365.0    0.0

#

maneuver definition   467   480.00 #ew274 at 200,360

s   205.0    370.0  200.0

e   205.0    370.0    0.0

#

maneuver definition   468  1700.00 #ew276 at 140,410

s   120.0    390.0  200.0

e   120.0    390.0    0.0

#

maneuver definition   469  1800.00 #ew278 at 200,400

s   220.0    390.0  200.0

e   220.0    390.0    0.0

#

maneuver definition   470   750.00 #ew280 at 290,320

s   295.0    310.0  200.0

e   295.0    310.0    0.0

#

maneuver definition   471  1300.00 #ew282 at 280,262

s   280.0   270.0   30.0

e   280.0   270.0    0.0

#-------------------------------------------

# tasks 472-474 mobile SAM sites (N=3)
##########Mobile SAM Sites

#-------------------------------------------

maneuver definition   472  5000.000

s   30.0   280.0  3000.0

e   30.0   280.0   0.0
```

```
#
maneuver definition   473  5000.000
s   70.0   280.0  3000.0
e   70.0   280.0  0.0
#
maneuver definition   474  5000.000
s   320.0   230.0  3000.0
e   320.0   230.0  0.0
#
#-------------- THE END ------------------
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